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ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Butler County, Nebraska: Published

Map symbol	Soil name	Acres	Percent
AED	Arents, Earthen Dam	58	*
Af	Alda Fine Sandy Loam, 0 To 2 Percent Slopes	1,790	0.5
Ba	Barney Loam, 0 To 2 Percent Slopes	2,140	0.6
Bd	Blendon Fine Sandy Loam, 0 To 2 Percent Slopes	1,350	0.4
BdC	Blendon Fine Sandy Loam, 2 To 6 Percent Slopes	240	*
Bf	Blendon-Muir Complex, 0 To 2 Percent Slopes	3,920	1.0
Bh	Boel Loam, 0 To 2 Percent Slopes	990	0.3
Bn	Boel-Alda Complex, 0 To 2 Percent Slopes	2,290	0.6
Br	Brocksburg Sandy Loam, 0 To 2 Percent Slopes	1,740	0.5
BsD	Burchard Loam, 6 To 11 Percent Slopes	2,240	0.6
BsE	Burchard Loam, 11 To 15 Percent Slopes	1,270	0.3
BtE2	Burchard-Steinauer Clay Loams, 11 To 15 Percent Slopes, Eroded	2,220	0.6
Bu	Butler Silt Loam, 0 To 1 Percent Slopes	15,590	4.2
CfG	Coly Silt Loam, 30 To 60 Percent Slopes	1,260	0.3
CoB	Cozad Silt Loam, 1 To 3 Percent Slopes	2,380	0.6
CrD2	Crofton Silt Loam, 6 To 11 Percent Slopes, Eroded	600	0.2
CrE2	Crofton Silt Loam, 11 To 17 Percent Slopes, Eroded	5,130	1.4
CrF2	Crofton Silt Loam, 17 To 30 Percent Slopes, Eroded	700	0.2
CrG	Crofton Silt Loam, 30 To 60 Percent Slopes	1,180	0.3
Fm	Fillmore Silt Loam, 0 To 1 Percent Slopes	8,530	2.3
Gb	Gibbon Silty Clay Loam, 0 To 2 Percent Slopes	7,180	1.9
GP	Gravel Pit	359	*
Gr	Grigston Silt Loam, 0 To 1 Percent Slopes	3,780	1.0
Ha	Hall Silt Loam, 0 To 1 Percent Slopes	2,250	0.6
Hc	Hastings Silt Loam, 0 To 1 Percent Slopes	76,764	20.5
HcB	Hastings Silt Loam, 1 To 3 Percent Slopes	23,500	6.3
HcC	Hastings Silt Loam, 3 To 6 Percent Slopes	1,830	0.5
HcD	Hastings Silt Loam, 6 To 11 Percent Slopes	390	0.1
HdC2	Hastings Silty Clay Loam, 3 To 6 Percent Slopes, Eroded	8,730	2.3
HdD2	Hastings Silty Clay Loam, 6 To 11 Percent Slopes, Eroded	27,480	7.3
Hg	Hobbs Silt Loam, 0 To 1 Percent Slopes	11,840	3.2
HhB	Hobbs Silt Loam, Channeled, 0 To 2 Percent Slopes	5,740	1.5
HkB	Holder Silt Loam, 1 To 3 Percent Slopes	1,820	0.5
INT	Aquolls	23	*
IvC	Inavale Loamy Sand, 2 To 6 Percent Slopes	1,190	0.3
IwC	Inavale-Boel Complex, 0 To 6 Percent Slopes	600	0.2
JuC	Judson Silt Loam, 2 To 6 Percent Slopes	8,030	2.1
Kz	Kezan Silt Loam, 0 To 2 Percent Slopes	6,560	1.8
La	Lamo Silty Clay Loam, 0 To 2 Percent Slopes	1,330	0.4
LoC2	Longford Silty Clay Loam, 2 To 6 Percent Slopes, Eroded	460	0.1
LoD2	Longford Silty Clay Loam, 6 To 11 Percent Slopes, Eroded	870	0.2
M-W	Miscellaneous Water (sewage Lagoon)	89	*
MnC	Monona Silt Loam, 2 To 6 Percent Slopes	880	0.2
MnD2	Monona Silt Loam, 6 To 11 Percent Slopes, Eroded	1,690	0.5
MnE	Monona Silt Loam, 11 To 17 Percent Slopes	740	0.2
MnF	Monona Silt Loam, 17 To 30 Percent Slopes	4,380	1.2
Mu	Muir Silt Loam, 0 To 1 Percent Slopes	14,360	3.8
MuB	Muir Silt Loam, 1 To 3 Percent Slopes	4,510	1.2
Ob	Olbut-Butler Silt Loams, 0 To 1 Percent Slopes	4,660	1.2
OvB	Ovina Loamy Fine Sand, 0 To 3 Percent Slopes	2,130	0.6
OxC	Ovina-Thurman Complex, 0 To 6 Percent Slopes	2,690	0.7
PaC2	Pawnee Clay Loam, 3 To 6 Percent Slopes, Eroded	620	0.2
PaD2	Pawnee Clay Loam, 6 To 11 Percent Slopes, Eroded	5,670	1.5
PoC2	Ponca Silty Clay Loam, 2 To 6 Percent Slopes, Eroded	750	0.2
PoD2	Ponca Silty Clay Loam, 6 To 11 Percent Slopes, Eroded	6,620	1.8
PoE2	Ponca Silty Clay Loam, 11 To 17 Percent Slopes, Eroded	7,520	2.0
PsD2	Ponca-Crofton Complex, 6 To 11 Percent Slopes, Eroded	1,790	0.5
PsE2	Ponca-Crofton Complex, 11 To 17 Percent Slopes, Eroded	7,870	2.1
PsF2	Ponca-Crofton Complex, 17 To 30 Percent Slopes, Eroded	850	0.2
Sa	Saltine-Gibbon Silt Loams, 0 To 1 Percent Slopes	3,060	0.8
Sc	Scott Silt Loam, 0 To 1 Percent Slopes	1,040	0.3
Sh	Sharpsburg Silty Clay Loam, 0 To 2 Percent Slopes	490	0.1
ShC	Sharpsburg Silty Clay Loam, 2 To 6 Percent Slopes	4,100	1.1
ShC2	Sharpsburg Silty Clay Loam, 2 To 6 Percent Slopes, Eroded	8,330	2.2
ShD	Sharpsburg Silty Clay Loam, 6 To 11 Percent Slopes	520	0.1
ShD2	Sharpsburg Silty Clay Loam, 6 To 11 Percent Slopes, Eroded	7,270	1.9
Sk	Silver Creek Complex, 0 To 2 Percent Slopes	720	0.2
SmB	Simeon Loamy Sand, 0 To 3 Percent Slopes	1,290	0.3
StD2	Steinauer Clay Loam, 6 To 11 Percent Slopes, Eroded	910	0.2
StF	Steinauer Clay Loam, 11 To 30 Percent Slopes	3,520	0.9
StG	Steinauer Clay Loam, 30 To 50 Percent Slopes	3,130	0.8
ThC	Thurman Loamy Fine Sand, 3 To 6 Percent Slopes	2,920	0.8
TkD	Thurman-Monona Complex, 6 To 11 Percent Slopes	600	0.2
UaF2	Uly Silt Loam, 11 To 15 Percent Slopes, Eroded	1,250	0.3
UbF	Uly-Coly Silt Loams, 15 To 30 Percent Slopes	2,540	0.7
UcF2	Uly-Coly Silt Loams, 15 To 25 Percent Slopes, Eroded	4,210	1.1
UhF2	Uly-Hobbs Silt Loams, 0 To 30 Percent Slopes, Eroded	4,190	1.1
UkC2	Uly Variant Silty Clay Loam, 3 To 6 Percent Slopes, Eroded	840	0.2
W	Water	1,725	0.5
WoB	Wood River Silt Loam, 1 To 3 Percent Slopes	710	0.2
Zk	Zook Silt Loam, Overwash, 0 To 2 Percent Slopes	2,580	0.7
Zo	Zook Silty Clay Loam, 0 To 2 Percent Slopes	3,780	1.0
	Total	373,888	100.0

* Less than 0.1 percent.

NONTECHNICAL SOIL DESCRIPTIONS
Butler County, Nebraska

Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units, shown in the NonTechnical Descriptions report. These descriptions are written in terminology that Non-technical users of soil survey information can understand.
Nontechnical soil descriptions are a powerful tool for creating reports. These high quality, easy to read reports can be generated by conservation planners and other NRCS employees for distribution to land users. Soil map unit descriptions and National Soil Information System records are the basis for these descriptions.

Af Alda Fine Sandy Loam, 0 To 2 Percent Slopes

Alda soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3w. It is in the nonirrigated land capability classification 3w.

Ba Barney Loam, 0 To 2 Percent Slopes

Barney soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is low. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Wet Land - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 5w.

Bd Blendon Fine Sandy Loam, 0 To 2 Percent Slopes

Blendon soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2s.

BdC Blendon Fine Sandy Loam, 2 To 6 Percent Slopes

Blendon soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping terrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Bf Blendon-Muir Complex, 0 To 2 Percent Slopes

Blendon soil makes up 60 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is low. The parent material consists of loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2s.

Muir soil makes up 40 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of silty colluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. This soil is in the Silty Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 1.

Bh Boel Loam, 0 To 2 Percent Slopes

Boel soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is low. The parent material consists of sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3w. It is in the nonirrigated land capability classification 3w.

Bn Boel-Alda Complex, 0 To 2 Percent Slopes

Boel soil makes up 55 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is low. The parent material consists of sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3w. It is in the nonirrigated land capability classification 3w.

Alda soil makes up 45 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3w. It is in the nonirrigated land capability classification 3w.

Br Brocksburg Sandy Loam, 0 To 2 Percent Slopes

Brocksburg soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is low. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is well drained. The slowest permeability is moderate. It has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

BsD Burchard Loam, 6 To 11 Percent Slopes

Burchard soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is high. The parent material consists of calcareous till. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 3e.

BsE Burchard Loam, 11 To 15 Percent Slopes

Burchard soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep backslope hillslope on upland. The runoff class is high. The parent material consists of calcareous till. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

BtE2 Burchard-Steinauer Clay Loams, 11 To 15 Percent Slopes, Eroded

Burchard soil makes up 50 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep backslope hillslope on upland. The runoff class is high. The parent material consists of calcareous till. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

Steinauer soil makes up 50 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep backslope hillslope on upland. The runoff class is high. The parent material consists of calcareous loamy till. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 20 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

Bu Butler Silt Loam, 0 To 1 Percent Slopes

Butler soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level swale on upland, terrace on river valley. The runoff class is medium. The parent material consists of loess. This soil is somewhat poorly drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 15 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clayey - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

CfG Coly Silt Loam, 30 To 60 Percent Slopes

Coly soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a steep to very steep hillslope on upland. The runoff class is high. The parent material consists of fine-silty calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Thin Loess - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 7e.

CoB Cozad Silt Loam, 1 To 3 Percent Slopes

Cozad soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a gently sloping terrace on river valley. The runoff class is low. The parent material consists of coarse-silty alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

CrD2 Crofton Silt Loam, 6 To 11 Percent Slopes, Eroded

Crofton soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

CrE2 Crofton Silt Loam, 11 To 17 Percent Slopes, Eroded

Crofton soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

CrF2 Crofton Silt Loam, 17 To 30 Percent Slopes, Eroded

Crofton soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is high. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

CrG Crofton Silt Loam, 30 To 60 Percent Slopes

Crofton soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a steep to very steep hillslope on upland. The runoff class is high. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Thin Loess - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 7e.

Fm Fillmore Silt Loam, 0 To 1 Percent Slopes

Fillmore soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level playa on upland. The runoff class is negligible. The parent material consists of loess. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is occasional ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clayey Overflow - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4w. It is in the nonirrigated land capability classification 3w.

Gb Gibbon Silty Clay Loam, 0 To 2 Percent Slopes

Gibbon soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is medium. The parent material consists of stratified calcareous silty alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 15 percent calcium carbonate. it has a horizon that is slightly sodic. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

Gr Grigston Silt Loam, 0 To 1 Percent Slopes

Grigston soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of calcareous alluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 1.

Ha Hall Silt Loam, 0 To 1 Percent Slopes

Hall soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level terrace on river valley. The runoff class is negligible. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 1.

Hc Hastings Silt Loam, 0 To 1 Percent Slopes

Hastings soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level interfluve on upland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 1.

HcB Hastings Silt Loam, 1 To 3 Percent Slopes

Hastings soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping interfluve on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

HcC Hastings Silt Loam, 3 To 6 Percent Slopes

Hastings soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

HcD Hastings Silt Loam, 6 To 11 Percent Slopes

Hastings soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

HdC2 Hastings Silty Clay Loam, 3 To 6 Percent Slopes, Eroded

Hastings soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

HdD2 Hastings Silty Clay Loam, 6 To 11 Percent Slopes, Eroded

Hastings soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

Hg Hobbs Silt Loam, 0 To 1 Percent Slopes

Hobbs soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on valley. The runoff class is negligible. The parent material consists of stratified silty alluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty Overflow - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

HhB Hobbs Silt Loam, Channeled, 0 To 2 Percent Slopes

Hobbs soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of stratified silty alluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty Overflow - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6w.

HkB Holder Silt Loam, 1 To 3 Percent Slopes

Holder soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping interfluve on upland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

INT Aquolls

Aquolls soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Central Loess Plains Loess Uplands Major Land Resource Area. This soil occurs on a nearly level depression. The runoff class is negligible. The parent material consists of alluvium. This soil is very poorly drained. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is occasional ponded. The top of the seasonal high water table is at 0 inches. It is in the nonirrigated land capability classification 5w.

IvC Inavale Loamy Sand, 2 To 6 Percent Slopes

Inavale soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping flood plain on river valley. The runoff class is negligible. The parent material consists of sandy alluvium. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

IwC Inavale-Boel Complex, 0 To 6 Percent Slopes

Inavale soil makes up 65 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a moderately sloping flood plain on river valley. The runoff class is negligible. The parent material consists of sandy alluvium. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

Boel soil makes up 35 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is very low. The parent material consists of sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3w. It is in the nonirrigated land capability classification 3w.

JuC Judson Silt Loam, 2 To 6 Percent Slopes

Judson soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping footslope hillslope on upland, terrace on valley. The runoff class is low. The parent material consists of fine-silty colluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 2e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

Kz Kezan Silt Loam, 0 To 2 Percent Slopes

Kezan soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of silty alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Wet Subirrigated - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4w.

La Lamo Silty Clay Loam, 0 To 2 Percent Slopes

Lamo soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is medium. <parent material is missing> This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a very high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

LoC2 Longford Silty Clay Loam, 2 To 6 Percent Slopes, Eroded

Longford soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clayey - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

LoD2 Longford Silty Clay Loam, 6 To 11 Percent Slopes, Eroded

Longford soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is very high. The parent material consists of loess. This soil is well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clayey - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

MnC Monona Silt Loam, 2 To 6 Percent Slopes

Monona soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping hillslope on upland. The runoff class is low. The parent material consists of fine-silty loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 2e.

MnD2 Monona Silt Loam, 6 To 11 Percent Slopes, Eroded

Pohocco soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 3e.

MnE Monona Silt Loam, 11 To 17 Percent Slopes

Monona soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is medium. The parent material consists of fine-silty loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

MnF Monona Silt Loam, 17 To 30 Percent Slopes

Monona soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is high. The parent material consists of fine-silty loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

Mu Muir Silt Loam, 0 To 1 Percent Slopes

Muir soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on valley. The runoff class is negligible. The parent material consists of silty colluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. This soil is in the Silty Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 1.

MuB Muir Silt Loam, 1 To 3 Percent Slopes

Muir soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a gently sloping flood plain on valley, hillslope on upland. The runoff class is low. The parent material consists of silty colluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. This soil is in the Silty Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

Ob Olbut-Butler Silt Loams, 0 To 1 Percent Slopes

Olbut soil makes up 65 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level playa on upland. The runoff class is medium. The parent material consists of loess. This soil is somewhat poorly drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is moderately sodic. This soil is in the Saline Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 3s.

Butler soil makes up 35 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level swale on upland. The runoff class is medium. The parent material consists of loess. This soil is somewhat poorly drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 15 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clayey - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

OvB Ovina Loamy Fine Sand, 0 To 3 Percent Slopes

Ovina soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over loamy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3w. It is in the nonirrigated land capability classification 3w.

OxC Ovina-Thurman Complex, 0 To 6 Percent Slopes

Ovina soil makes up 50 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to moderately sloping terrace on river valley. The runoff class is very low. The parent material consists of loamy eolian deposits over loamy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3w. It is in the nonirrigated land capability classification 3w.

Thurman soil makes up 50 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to moderately sloping terrace on river valley. The runoff class is negligible. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

PaC2 Pawnee Clay Loam, 3 To 6 Percent Slopes, Eroded

Pawnee soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping backslope hillslope on upland. The runoff class is very high. The parent material consists of clayey till. This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Clayey - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 3e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

PaD2 Pawnee Clay Loam, 6 To 11 Percent Slopes, Eroded

Pawnee soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is very high. The parent material consists of clayey till. This soil is moderately well drained. The slowest permeability is very slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Clayey - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

PoC2 Ponca Silty Clay Loam, 2 To 6 Percent Slopes, Eroded

Pohocco soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping backslope hillslope on upland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 2e.

PoD2 Ponca Silty Clay Loam, 6 To 11 Percent Slopes, Eroded

Pohocco soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 3e.

PoE2 Ponca Silty Clay Loam, 11 To 17 Percent Slopes, Eroded

Pohocco soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep backslope hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

PsD2 Ponca-Crofton Complex, 6 To 11 Percent Slopes, Eroded

Pohocco soil makes up 65 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 3e.

Crofton soil makes up 35 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

PsE2 Ponca-Crofton Complex, 11 To 17 Percent Slopes, Eroded

Pohocco soil makes up 65 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep backslope hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

Crofton soil makes up 35 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

PsF2 Ponca-Crofton Complex, 17 To 30 Percent Slopes, Eroded

Pohocco soil makes up 65 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately steep to steep backslope hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

Crofton soil makes up 35 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is high. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

Sa Saltine-Gibbon Silt Loams, 0 To 1 Percent Slopes

Saltine soil makes up 60 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is low. The parent material consists of silty alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a very high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a moderately saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6s.

Gibbon soil makes up 40 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of stratified calcareous silty alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 15 percent calcium carbonate. it has a horizon that is slightly sodic. This soil is in the Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

Sc Scott Silt Loam, 0 To 1 Percent Slopes

Scott soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level playa on upland. The runoff class is negligible. The parent material consists of loess. This soil is poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clayey Overflow - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4w.

Sh Sharpsburg Silty Clay Loam, 0 To 2 Percent Slopes

Aksarben soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a nearly level to gently sloping summit interfluve on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 1.

ShC Sharpsburg Silty Clay Loam, 2 To 6 Percent Slopes

Aksarben soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping summit interfluve on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 2e.

ShC2 Sharpsburg Silty Clay Loam, 2 To 6 Percent Slopes, Eroded

Yutan soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping backslope hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 2e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

ShD Sharpsburg Silty Clay Loam, 6 To 11 Percent Slopes

Aksarben soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping summit interfluve on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 3e.

ShD2 Sharpsburg Silty Clay Loam, 6 To 11 Percent Slopes, Eroded

Yutan soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 3e.

Sk Silver Creek Complex, 0 To 2 Percent Slopes

Silver Creek soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is high. The parent material consists of alluvium. This soil is somewhat poorly drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Saline Subirrigated - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 4s.

SmB Simeon Loamy Sand, 0 To 3 Percent Slopes

Simeon soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping terrace on river valley. The runoff class is negligible. The parent material consists of sandy and gravelly alluvium. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

StD2 Steinauer Clay Loam, 6 To 11 Percent Slopes, Eroded

Steinauer soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope hillslope on upland. The runoff class is high. The parent material consists of calcareous loamy till. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 20 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 4e.

StF Steinauer Clay Loam, 11 To 30 Percent Slopes

Steinauer soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a strongly sloping to steep backslope hillslope on upland. The runoff class is very high. The parent material consists of calcareous loamy till. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 20 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

StG Steinauer Clay Loam, 30 To 50 Percent Slopes

Steinauer soil makes up 100 percent of the map unit. This map unit is in the Nebraska and Kansas Loess-Drift Hills Major Land Resource Area. This soil occurs on a steep to very steep backslope hillslope on upland. The runoff class is very high. The parent material consists of calcareous loamy till. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 20 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 7e.

ThC Thurman Loamy Fine Sand, 3 To 6 Percent Slopes

Thurman soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a moderately sloping terrace on river valley. The runoff class is negligible. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

TkD Thurman-Monona Complex, 6 To 11 Percent Slopes

Thurman soil makes up 70 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is very low. The parent material consists of sandy eolian deposits. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

Monona Variant soil makes up 30 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of fine-silty loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

UaF2 Uly Silt Loam, 11 To 15 Percent Slopes, Eroded

Uly soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is medium. The parent material consists of fine-silty calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

UbF Uly-Coly Silt Loams, 15 To 30 Percent Slopes

Uly soil makes up 60 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is high. The parent material consists of fine-silty calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

Coly soil makes up 40 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is high. The parent material consists of fine-silty calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

UcF2 Uly-Coly Silt Loams, 15 To 25 Percent Slopes, Eroded

Uly soil makes up 50 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is medium. The parent material consists of fine-silty calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

Coly soil makes up 50 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is medium. The parent material consists of fine-silty calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

UhF2 Uly-Hobbs Silt Loams, 0 To 30 Percent Slopes, Eroded

Uly soil makes up 70 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping to steep hillslope on upland. The runoff class is medium. The parent material consists of fine-silty calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 6e.

Hobbs soil makes up 30 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is low. The parent material consists of stratified silty alluvium. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty Overflow - Veg. Zone 4 range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Butler County, Nebraska

UkC2 Uly Variant Silty Clay Loam, 3 To 6 Percent Slopes, Eroded

Uly Variant soil makes up 100 percent of the map unit. This map unit is in the Central Loess Plains Major Land Resource Area. This soil occurs on a moderately sloping terrace on river valley. The runoff class is medium. The parent material consists of fine-silty calcareous loess. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a very high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is moderately sodic. This soil is in the Silty - Veg. Zone 4 range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 4s.

WoB Wood River Silt Loam, 1 To 3 Percent Slopes

Wood River soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a gently sloping terrace on river valley. The runoff class is high. The parent material consists of silty alluvium. This soil is moderately well drained. The slowest permeability is slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Lowland - Veg. Zone 4 range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 4s.

Zk Zook Silt Loam, Overwash, 0 To 2 Percent Slopes

Zook soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is high. The parent material consists of clayey alluvium. This soil is poorly drained. The slowest permeability is slow. It has a moderate available water capacity and a high shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 6 inches. This soil is in the Clayey Overflow - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 2w.

Zo Zook Silty Clay Loam, 0 To 2 Percent Slopes

Zook soil makes up 100 percent of the map unit. This map unit is in the Loess Uplands Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is high. The parent material consists of clayey alluvium. This soil is poorly drained. The slowest permeability is slow. It has a moderate available water capacity and a high shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 6 inches. This soil is in the Clayey Overflow - Veg. Zone 4 range site. It is in the nonirrigated land capability classification 2w.

AED—Arents, Earthen Dam

Map Unit Composition

Arents, Earthen Dam: 100 percent

Component Descriptions
Arents, Earthen Dam
MLRA: 102C - Loess Uplands,106 - Nebraska and Kansas Loess-Drift Hills,75 - Central Loess Plains
Depth to seasonal water saturation: More than 6 feet
Land capability (nonirrigated): 8

Af—Alda fine sandy loam, 0 to 2 percent slopes

Map Unit Composition

Alda: 100 percent

Component Descriptions
Alda
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Loamy alluvium over sandy and gravelly alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 5.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Very low
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 3w
Land capability (nonirrigated): 3w

Typical Profile:
H1—0 to 14 inches; fine sandy loam
H2—14 to 26 inches; fine sandy loam
H3—26 to 60 inches; coarse sand

Minor Components
Barney
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Wet Land - Veg. Zone 4

Ba—Barney loam, 0 to 2 percent slopes

Map Unit Composition

Barney: 100 percent

Component Descriptions
Barney
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Loamy alluvium over sandy and gravelly alluvium
Slope: 0 to 2 percent
Drainage class: Poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 3.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 0 to 24 inches
Runoff class: Low
Ecological site: Wet Land - Veg. Zone 4
Land capability (nonirrigated): 5w

Typical Profile:
H1—0 to 7 inches; loam
H2—7 to 14 inches;
H3—14 to 60 inches; fine sand

Bd—Blendon fine sandy loam, 0 to 2 percent slopes

Map Unit Composition

Blendon: 100 percent

Component Descriptions
Blendon
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Loamy alluvium
Slope: 0 to 2 percent
Drainage class: Well drained

Slowest permeability: Moderate (About 0.57 in/hr)
Available water capacity: Moderate (About 7.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy - Veg. Zone 4
Land capability (irrigated): 2e
Land capability (nonirrigated): 2s

Typical Profile:
H1—0 to 15 inches; fine sandy loam
H2—15 to 44 inches; fine sandy loam
H3—44 to 60 inches;

BdC—Blendon fine sandy loam, 2 to 6 percent slopes

Map Unit Composition

Blendon: 100 percent

Component Descriptions
Blendon
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Loamy alluvium
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.57 in/hr)
Available water capacity: Moderate (About 7.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 15 inches; fine sandy loam
H2—15 to 44 inches; fine sandy loam
H3—44 to 60 inches;

Bf—Blendon-Muir complex, 0 to 2 percent slopes

Map Unit Composition

Blendon: 60 percent
Muir: 40 percent

Component Descriptions
Blendon
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Loamy alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.57 in/hr)
Available water capacity: Moderate (About 7.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy - Veg. Zone 4
Land capability (irrigated): 2e
Land capability (nonirrigated): 2s

Typical Profile:
H1—0 to 15 inches; fine sandy loam
H2—15 to 44 inches; fine sandy loam
H3—44 to 60 inches;

Muir
MLRA: 102C - Loess Uplands
Landform: Flood plain on valley
Parent material: Silty colluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: Low
Ecological site: Silty Lowland - Veg. Zone 4
Land capability (irrigated): 1
Land capability (nonirrigated): 1

Typical Profile:
H1—0 to 20 inches; silt loam
H2—20 to 36 inches; silt loam

H3—36 to 60 inches; silt loam

Bh—Boel loam, 0 to 2 percent slopes

Map Unit Composition

Boel: 100 percent

Component Descriptions
Boel
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 6.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Low
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 3w
Land capability (nonirrigated): 3w

Typical Profile:
H1—0 to 14 inches; loam
H2—14 to 60 inches;

Minor Components
Wt At 0-1 Foot

Bn—Boel-Alda complex, 0 to 2 percent slopes

Map Unit Composition

Boel: 55 percent
Alda: 45 percent

Component Descriptions
Boel
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 7.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Low
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 3w
Land capability (nonirrigated): 3w

Typical Profile:
H1—0 to 17 inches; loam
H2—17 to 60 inches;

Alda
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Loamy alluvium over sandy and gravelly alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 5.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Very low
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 3w
Land capability (nonirrigated): 3w

Typical Profile:
H1—0 to 14 inches; fine sandy loam
H2—14 to 26 inches; fine sandy loam
H3—26 to 60 inches; coarse sand

Minor Components
Wt At 0-1 Foot

Br—Brocksburg sandy loam, 0 to 2 percent slopes

Map Unit Composition

Brocksburg: 100 percent

Component Descriptions
Brocksburg
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Loamy alluvium over sandy and gravelly alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 5.1 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 12 inches; fine sandy loam
H2—12 to 28 inches; loam
H3—28 to 40 inches;

BsD—Burchard loam, 6 to 11 percent slopes

Map Unit Composition

Burchard: 100 percent

Component Descriptions
Burchard
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Calcareous till
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 12 inches; loam
H2—12 to 32 inches; clay loam
H3—32 to 60 inches;

BsE—Burchard loam, 11 to 15 percent slopes

Map Unit Composition

Burchard: 100 percent

Component Descriptions
Burchard
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Calcareous till
Slope: 11 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 12 inches; loam
H2—12 to 32 inches; clay loam
H3—32 to 60 inches; clay loam

BtE2—Burchard-Steinauer clay loams, 11 to 15 percent slopes, Eroded

Map Unit Composition

Burchard: 50 percent

Steinauer: 50 percent

Component Descriptions
Burchard
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Calcareous till
Slope: 11 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 7 inches; clay loam
H2—7 to 25 inches; clay loam
H3—25 to 60 inches; clay loam

Steinauer
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Calcareous loamy till
Slope: 11 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 9 inches; clay loam
H2—9 to 18 inches; clay loam
H3—18 to 60 inches; clay loam

Bu—Butler silt loam, 0 to 1 percent slopes

Map Unit Composition

Butler: 100 percent

Component Descriptions
Butler
MLRA: 75 - Central Loess Plains
Landform: Swale on upland, terrace on river valley
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.4 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 6 to 24 inches
Runoff class: Medium
Ecological site: Clayey - Veg. Zone 4
Land capability (irrigated): 2w
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 14 inches; silt loam
H2—14 to 35 inches; silty clay
H3—35 to 40 inches; silty clay loam
H4—40 to 60 inches; silt loam

Minor Components
Fillmore
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 4

CfG—Coly silt loam, 30 to 60 percent slopes

Map Unit Composition

Coly: 100 percent

Component Descriptions
Coly
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Fine-silty calcareous loess
Slope: 30 to 60 percent

Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Thin Loess - Veg. Zone 4
Land capability (nonirrigated): 7e

Typical Profile:
H1—0 to 4 inches; silt loam
H2—4 to 60 inches; silt loam

CoB—Cozad silt loam, 1 to 3 percent slopes

Map Unit Composition

Cozad: 100 percent

Component Descriptions
Cozad
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Coarse-silty alluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty Lowland - Veg. Zone 4
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 12 inches; silt loam
H2—12 to 29 inches; silt loam
H3—29 to 60 inches; very fine sandy loam

CrD2—Crofton silt loam, 6 to 11 percent slopes, Eroded

Map Unit Composition

Crofton: 100 percent

Component Descriptions
Crofton
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 60 inches; silt loam

CrE2—Crofton silt loam, 11 to 17 percent slopes, Eroded

Map Unit Composition

Crofton: 100 percent

Component Descriptions
Crofton
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 11 to 17 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 60 inches; silt loam

CrF2—Crofton silt loam, 17 to 30 percent slopes, Eroded

Map Unit Composition

Crofton: 100 percent

Component Descriptions
Crofton
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 17 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 60 inches; silt loam

CrG—Crofton silt loam, 30 to 60 percent slopes

Map Unit Composition

Crofton: 100 percent

Component Descriptions
Crofton
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Thin Loess - Veg. Zone 4
Land capability (nonirrigated): 7e

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 60 inches; silt loam

Fm—Fillmore silt loam, 0 to 1 percent slopes

Map Unit Composition

Fillmore: 100 percent

Component Descriptions
Fillmore
MLRA: 75 - Central Loess Plains
Landform: Playa on upland
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: High (About 9.6 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Ponding hazard: Occasional
Depth to seasonal water saturation: About 0 to 0 inches
Runoff class: Negligible
Ecological site: Clayey Overflow - Veg. Zone 4
Land capability (irrigated): 4w
Land capability (nonirrigated): 3w

Typical Profile:
H1—0 to 12 inches; silt loam

H2—12 to 34 inches; silty clay
H3—34 to 60 inches; silty clay loam

Minor Components
Scott
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clayey Overflow - Veg. Zone 4

Gb—Gibbon silty clay loam, 0 to 2 percent slopes

Map Unit Composition

Gibbon: 100 percent

Component Descriptions
Gibbon
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Stratified calcareous silty alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Medium
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 2w
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 14 inches; silty clay loam
H2—14 to 36 inches;
H3—36 to 60 inches;

Minor Components
Wt At 0-1 Foot

GP—Gravel Pit

Map Unit Composition

Pits: 100 percent

Component Descriptions
Pits
MLRA: 102C - Loess Uplands,106 - Nebraska and Kansas Loess-Drift Hills,75 - Central Loess Plains
Slope: 0 to 30 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Land capability (nonirrigated): 8s

Gr—Grigston silt loam, 0 to 1 percent slopes

Map Unit Composition

Grigston: 100 percent

Component Descriptions
Grigston
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Calcareous alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: Negligible
Ecological site: Silty Lowland - Veg. Zone 4
Land capability (irrigated): 1
Land capability (nonirrigated): 1

Typical Profile:
H1—0 to 19 inches; silt loam
H2—19 to 36 inches; silt loam
H3—36 to 60 inches; silt loam

Minor Components
Wt At 0-1 Foot

Ha—Hall silt loam, 0 to 1 percent slopes

Map Unit Composition

Hall: 100 percent

Component Descriptions
Hall
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty Lowland - Veg. Zone 4
Land capability (irrigated): 1
Land capability (nonirrigated): 1

Typical Profile:
H1—0 to 18 inches; silt loam
H2—18 to 39 inches; silty clay loam
H3—39 to 60 inches; silt loam

Hc—Hastings silt loam, 0 to 1 percent slopes

Map Unit Composition

Hastings: 100 percent

Component Descriptions
Hastings
MLRA: 75 - Central Loess Plains
Landform: Interfluve on upland
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 1
Land capability (nonirrigated): 1

Typical Profile:
H1—0 to 10 inches; silt loam
H2—10 to 40 inches; silty clay loam
H3—40 to 60 inches; silt loam

Minor Components
Fillmore
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 4

HcB—Hastings silt loam, 1 to 3 percent slopes

Map Unit Composition

Hastings: 100 percent

Component Descriptions
Hastings
MLRA: 75 - Central Loess Plains
Landform: Interfluve on upland
Parent material: Loess
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 2e

Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 10 inches; silt loam
H2—10 to 40 inches; silty clay loam
H3—40 to 60 inches; silt loam

Minor Components
Fillmore
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 4

HcC—Hastings silt loam, 3 to 6 percent slopes

Map Unit Composition

Hastings: 100 percent

Component Descriptions
Hastings
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Loess
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 10 inches; silt loam
H2—10 to 40 inches; silty clay loam
H3—40 to 60 inches; silt loam

HcD—Hastings silt loam, 6 to 11 percent slopes

Map Unit Composition

Hastings: 100 percent

Component Descriptions
Hastings
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 10 inches; silt loam
H2—10 to 40 inches; silty clay loam
H3—40 to 60 inches; silt loam

HdC2—Hastings silty clay loam, 3 to 6 percent slopes, Eroded

Map Unit Composition

Hastings: 100 percent

Component Descriptions
Hastings
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Loess
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 6 inches; silty clay loam
H2—6 to 27 inches; silty clay loam
H3—27 to 60 inches; silt loam

Minor Components
Kezan
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Wet Subirrigated - Veg. Zone 4

HdD2—Hastings silty clay loam, 6 to 11 percent slopes, Eroded

Map Unit Composition

Hastings: 100 percent

Component Descriptions
Hastings
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 6 inches; silty clay loam
H2—6 to 27 inches; silty clay loam
H3—27 to 60 inches; silt loam

Minor Components
Kezan
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Wet Subirrigated - Veg. Zone 4

Hg—Hobbs silt loam, 0 to 1 percent slopes

Map Unit Composition

Hobbs: 100 percent

Component Descriptions
Hobbs
MLRA: 75 - Central Loess Plains
Landform: Flood plain on valley
Parent material: Stratified silty alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty Overflow - Veg. Zone 4
Land capability (irrigated): 2w
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 7 inches; silt loam
H2—7 to 25 inches; stratified silt loam
H3—25 to 60 inches; silt loam

Minor Components
Wt At 0-1 Foot

HhB—Hobbs silt loam, Channeled, 0 to 2 percent slopes

Map Unit Composition

Hobbs: 100 percent

Component Descriptions
Hobbs
MLRA: 75 - Central Loess Plains
Landform: Flood plain on valley
Parent material: Stratified silty alluvium

Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty Overflow - Veg. Zone 4
Land capability (nonirrigated): 6w

Typical Profile:
H1—0 to 7 inches; silt loam
H2—7 to 25 inches; stratified silt loam
H3—25 to 60 inches; silt loam

HkB—Holder silt loam, 1 to 3 percent slopes

Map Unit Composition

Holder: 100 percent

Component Descriptions
Holder
MLRA: 75 - Central Loess Plains
Landform: Interfluve on upland
Parent material: Loess
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.1 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 13 inches; silt loam
H2—13 to 42 inches; silty clay loam
H3—42 to 60 inches; silt loam

INT—Aquolls

Map Unit Composition

Aquolls: 100 percent

Component Descriptions
Aquolls
MLRA: 102C - Loess Uplands,106 - Nebraska and Kansas Loess-Drift Hills,75 - Central Loess Plains
Landform: Depression
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Very poorly drained
Flooding hazard: None
Ponding hazard: Occasional
Depth to seasonal water saturation: About 0 to 0 inches
Runoff class: Negligible
Land capability (nonirrigated): 5w

Typical Profile:
H1—0 to 72 inches; variable

General Considerations: This map unit was formerly labeled as an Intermittent Water spot symbol. These depressional areas contain soils that are occasionally ponded for long duration.

IvC—Inavale loamy sand, 2 to 6 percent slopes

Map Unit Composition

Inavale: 100 percent

Component Descriptions
Inavale
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 2 to 6 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 5.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare

Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: Negligible
Ecological site: Sandy Lowland - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 8 inches; loamy sand
H2—8 to 21 inches; fine sand
H3—21 to 60 inches; fine sand

Minor Components
Ponded Soils

IwC—Inavale-Boel complex, 0 to 6 percent slopes

Map Unit Composition
Inavale: 65 percent
Boel: 35 percent

Component Descriptions
Inavale
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 3 to 6 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 5.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy Lowland - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 8 inches; loamy sand
H2—8 to 21 inches; fine sand
H3—21 to 60 inches; fine sand

Boel
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 6.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Very low
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 3w
Land capability (nonirrigated): 3w

Typical Profile:
H1—0 to 14 inches; fine sandy loam
H2—14 to 60 inches;

Minor Components
Wt At 0-1 Foot

JuC—Judson silt loam, 2 to 6 percent slopes

Map Unit Composition

Judson: 100 percent

Component Descriptions
Judson
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland, terrace on valley
Hillslope position: Footslope
Parent material: Fine-silty colluvium
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 13.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 20 inches; silt loam
H2—20 to 42 inches; silty clay loam
H3—42 to 60 inches; silty clay loam

Kz—Kezan silt loam, 0 to 2 percent slopes

Map Unit Composition

Kezan: 100 percent

Component Descriptions
Kezan
MLRA: 75 - Central Loess Plains
Landform: Flood plain on valley
Parent material: Silty alluvium
Slope: 0 to 2 percent
Drainage class: Poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: Low
Ecological site: Wet Subirrigated - Veg. Zone 4
Land capability (nonirrigated): 4w

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 13 inches; silt loam
H3—13 to 60 inches; silt loam

La—Lamo silty clay loam, 0 to 2 percent slopes

Map Unit Composition

Lamo: 100 percent

Component Descriptions
Lamo
MLRA: 75 - Central Loess Plains
Landform: Flood plain on river valley
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.9 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: Medium
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 2w
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 12 inches; silty clay loam
H2—12 to 60 inches; silty clay loam

Minor Components
Wt At 0-1 Foot

LoC2—Longford silty clay loam, 2 to 6 percent slopes, Eroded

Map Unit Composition

Longford: 100 percent

Component Descriptions
Longford
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Loess
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Clayey - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 48 inches; silty clay
H3—48 to 60 inches; silty clay loam

LoD2—Longford silty clay loam, 6 to 11 percent slopes, Eroded

Map Unit Composition

Longford: 100 percent

Component Descriptions
Longford
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Clayey - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 48 inches; silty clay
H3—48 to 60 inches; silty clay loam

M-W—Miscellaneous Water (sewage Lagoon)

Map Unit Composition

Miscellaneous Water: 100 percent

Component Descriptions
Miscellaneous Water
MLRA: 102C - Loess Uplands,106 - Nebraska and Kansas Loess-Drift Hills,75 - Central Loess Plains
Depth to seasonal water saturation: More than 6 feet

MnC—Monona silt loam, 2 to 6 percent slopes

Map Unit Composition

Monona: 100 percent

Component Descriptions
Monona
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-silty loess
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 13 inches; silt loam
H2—13 to 42 inches; silt loam
H3—42 to 60 inches; silt loam

MnD2—Monona silt loam, 6 to 11 percent slopes, Eroded

Map Unit Composition

Pohocco: 100 percent

Component Descriptions
Pohocco
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loess
Slope: 6 to 11 percent
Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 13 inches; silt loam
H2—13 to 42 inches;
H3—42 to 60 inches;

MnE—Monona silt loam, 11 to 17 percent slopes

Map Unit Composition

Monona: 100 percent

Component Descriptions
Monona
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-silty loess
Slope: 11 to 17 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 13 inches; silt loam
H2—13 to 42 inches; silt loam
H3—42 to 60 inches; silt loam

MnF—Monona silt loam, 17 to 30 percent slopes

Map Unit Composition

Monona: 100 percent

Component Descriptions
Monona
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-silty loess
Slope: 17 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 13 inches; silt loam
H2—13 to 42 inches; silt loam
H3—42 to 60 inches; silt loam

Mu—Muir silt loam, 0 to 1 percent slopes

Map Unit Composition

Muir: 100 percent

Component Descriptions
Muir
MLRA: 75 - Central Loess Plains
Landform: Flood plain on valley
Parent material: Silty colluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 12.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: Negligible
Ecological site: Silty Lowland - Veg. Zone 4
Land capability (irrigated): 1
Land capability (nonirrigated): 1

Typical Profile:
H1—0 to 20 inches; silt loam
H2—20 to 36 inches; silt loam
H3—36 to 60 inches; silt loam

MuB—Muir silt loam, 1 to 3 percent slopes

Map Unit Composition

Muir: 100 percent

Component Descriptions
Muir
MLRA: 75 - Central Loess Plains
Landform: Flood plain on valley, hillslope on upland
Parent material: Silty colluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: Low
Ecological site: Silty Lowland - Veg. Zone 4
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 20 inches; silt loam
H2—20 to 36 inches; silt loam
H3—36 to 60 inches; silt loam

Ob—Olbut-Butler silt loams, 0 to 1 percent slopes

Map Unit Composition

Olbut: 65 percent
Butler: 35 percent

Component Descriptions
Olbut
MLRA: 75 - Central Loess Plains
Landform: Playa on upland
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 0 to 24 inches
Runoff class: Medium
Ecological site: Saline Lowland - Veg. Zone 4
Land capability (irrigated): 3s
Land capability (nonirrigated): 3s

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 20 inches; silty clay
H3—20 to 29 inches; silty clay loam
H4—29 to 80 inches; silt loam

Butler
MLRA: 75 - Central Loess Plains
Landform: Swale on upland
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.4 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 6 to 24 inches
Runoff class: Medium
Ecological site: Clayey - Veg. Zone 4
Land capability (irrigated): 2w
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 14 inches; silt loam
H2—14 to 35 inches; silty clay
H3—35 to 40 inches; silty clay loam
H4—40 to 60 inches; silt loam

OvB—Ovina loamy fine sand, 0 to 3 percent slopes

Map Unit Composition

Ovina: 100 percent

Component Descriptions
Ovina
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Loamy eolian deposits over loamy alluvium
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 8.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: Very low
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 3w
Land capability (nonirrigated): 3w

Typical Profile:
H1—0 to 16 inches; loamy fine sand
H2—16 to 21 inches; fine sandy loam
H3—21 to 60 inches; fine sandy loam

OxC—Ovina-Thurman complex, 0 to 6 percent slopes

Map Unit Composition

Ovina: 50 percent
Thurman: 50 percent

Component Descriptions
Ovina
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Loamy eolian deposits over loamy alluvium
Slope: 0 to 6 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 8.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: Very low
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 3w
Land capability (nonirrigated): 3w

Typical Profile:
H1—0 to 16 inches; loamy fine sand
H2—16 to 21 inches; fine sandy loam
H3—21 to 60 inches; fine sandy loam

Thurman
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Sandy eolian deposits
Slope: 0 to 6 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 10 inches; loamy fine sand
H2—10 to 16 inches; loamy fine sand
H3—16 to 60 inches; fine sand

PaC2—Pawnee clay loam, 3 to 6 percent slopes, Eroded

Map Unit Composition

Pawnee: 100 percent

Component Descriptions
Pawnee
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland

Hillslope position: Backslope
Parent material: Clayey till
Slope: 3 to 6 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 7.7 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: Very high
Ecological site: Clayey - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 9 inches; clay loam
H2—9 to 38 inches; clay
H3—38 to 60 inches; clay loam

PaD2—Pawnee clay loam, 6 to 11 percent slopes, Eroded

Map Unit Composition

Pawnee: 100 percent

Component Descriptions
Pawnee
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Clayey till
Slope: 6 to 11 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 7.7 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: Very high
Ecological site: Clayey - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 9 inches; clay loam
H2—9 to 38 inches; clay
H3—38 to 60 inches; clay loam

PoC2—Ponca silty clay loam, 2 to 6 percent slopes, Eroded

Map Unit Composition

Pohocco: 100 percent

Component Descriptions
Pohocco
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loess
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 27 inches;
H3—27 to 60 inches;

PoD2—Ponca silty clay loam, 6 to 11 percent slopes, Eroded

Map Unit Composition
Pohocco: 100 percent

Component Descriptions
Pohocco
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland

Hillslope position: Backslope
Parent material: Loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 27 inches;
H3—27 to 60 inches;

PoE2—Ponca silty clay loam, 11 to 17 percent slopes, Eroded

Map Unit Composition

Pohocco: 100 percent

Component Descriptions
Pohocco
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loess
Slope: 11 to 17 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 27 inches;
H3—27 to 60 inches;

PsD2—Ponca-Crofton complex, 6 to 11 percent slopes, Eroded

Map Unit Composition

Pohocco: 65 percent
Crofton: 35 percent

Component Descriptions
Pohocco
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 27 inches;
H3—27 to 60 inches;

Crofton
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 60 inches; silt loam

PsE2—Ponca-Crofton complex, 11 to 17 percent slopes, Eroded

Map Unit Composition

Pohocco: 65 percent
Crofton: 35 percent

Component Descriptions
Pohocco
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loess
Slope: 11 to 17 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 27 inches;
H3—27 to 60 inches;

Crofton
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 11 to 17 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 60 inches; silt loam

PsF2—Ponca-Crofton complex, 17 to 30 percent slopes, Eroded

Map Unit Composition

Pohocco: 65 percent
Crofton: 35 percent

Component Descriptions
Pohocco
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loess
Slope: 17 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 27 inches;
H3—27 to 60 inches;

Crofton

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 17 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 6 inches; silt loam
H2—6 to 60 inches; silt loam

Sa—Saltine-Gibbon silt loams, 0 to 1 percent slopes

Map Unit Composition

Saltine: 60 percent
Gibbon: 40 percent

Component Descriptions
Saltine
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Silty alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 12.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Low
Ecological site: Saline Subirrigated - Veg. Zone 4
Land capability (nonirrigated): 6s

Typical Profile:
H1—0 to 9 inches; silt loam
H2—9 to 25 inches; silty clay loam
H3—25 to 60 inches; silty clay loam

Gibbon
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Stratified calcareous silty alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate (About 0.57 in/hr)
Available water capacity: High (About 11.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Negligible
Ecological site: Subirrigated - Veg. Zone 4
Land capability (irrigated): 2w
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 14 inches; silt loam
H2—14 to 36 inches;
H3—36 to 60 inches;

Sc—Scott silt loam, 0 to 1 percent slopes

Map Unit Composition

Scott: 100 percent

Component Descriptions
Scott
MLRA: 75 - Central Loess Plains
Landform: Playa on upland
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Poorly drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: High (About 9.7 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Ponding hazard: Frequent

Depth to seasonal water saturation: About 0 to 0 inches
Runoff class: Negligible
Ecological site: Clayey Overflow - Veg. Zone 4
Land capability (nonirrigated): 4w

Typical Profile:
H1—0 to 10 inches; silt loam
H2—10 to 36 inches; silty clay
H3—36 to 49 inches; silty clay loam
H4—49 to 60 inches; silt loam

Sh—Sharpsburg silty clay loam, 0 to 2 percent slopes

Map Unit Composition

Aksarben: 100 percent

Component Descriptions
Aksarben
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Interfluve on upland
Hillslope position: Summit
Parent material: Loess
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 1
Land capability (nonirrigated): 1

Typical Profile:
H1—0 to 12 inches; silty clay loam
H2—12 to 46 inches;
H3—46 to 60 inches;

ShC—Sharpsburg silty clay loam, 2 to 6 percent slopes

Map Unit Composition

Aksarben: 100 percent

Component Descriptions
Aksarben
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Interfluve on upland
Hillslope position: Summit
Parent material: Loess
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 12 inches; silty clay loam
H2—12 to 46 inches;
H3—46 to 60 inches;

ShC2—Sharpsburg silty clay loam, 2 to 6 percent slopes, Eroded

Map Unit Composition

Yutan: 100 percent

Component Descriptions
Yutan
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loess
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)

Available water capacity: High (About 10.9 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 3e
Land capability (nonirrigated): 2e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 36 inches;
H3—36 to 60 inches;

ShD—Sharpsburg silty clay loam, 6 to 11 percent slopes

Map Unit Composition

Aksarben: 100 percent

Component Descriptions
Aksarben
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Interfluve on upland
Hillslope position: Summit
Parent material: Loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 12 inches; silty clay loam
H2—12 to 46 inches;
H3—46 to 60 inches;

ShD2—Sharpsburg silty clay loam, 6 to 11 percent slopes, Eroded

Map Unit Composition

Yutan: 100 percent

Component Descriptions
Yutan
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 3e

Typical Profile:
H1—0 to 7 inches; silty clay loam
H2—7 to 28 inches;
H3—28 to 60 inches;

Sk—Silver Creek complex, 0 to 2 percent slopes

Map Unit Composition

Silver Creek: 100 percent

Component Descriptions
Silver Creek
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained

Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 9.4 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: High
Ecological site: Saline Subirrigated - Veg. Zone 4
Land capability (irrigated): 4s
Land capability (nonirrigated): 4s

Typical Profile:
H1—0 to 15 inches; silt loam
H2—15 to 23 inches; silty clay
H3—23 to 50 inches; sandy clay loam
H4—50 to 60 inches; loamy fine sand

SmB—Simeon loamy sand, 0 to 3 percent slopes

Map Unit Composition

Simeon: 100 percent

Component Descriptions
Simeon
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Sandy and gravelly alluvium
Slope: 0 to 3 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 5.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 13 inches; loamy sand
H2—13 to 60 inches; coarse sand

StD2—Steinauer clay loam, 6 to 11 percent slopes, Eroded

Map Unit Composition
Steinauer: 100 percent

Component Descriptions
Steinauer
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Calcareous loamy till
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 6 inches; clay loam
H2—6 to 18 inches; clay loam
H3—18 to 60 inches; clay loam

StF—Steinauer clay loam, 11 to 30 percent slopes

Map Unit Composition

Steinauer: 100 percent

Component Descriptions
Steinauer
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Calcareous loamy till
Slope: 11 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.8 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 6 inches; clay loam
H2—6 to 18 inches; clay loam
H3—18 to 60 inches; clay loam

StG—Steinauer clay loam, 30 to 50 percent slopes

Map Unit Composition

Steinauer: 100 percent

Component Descriptions
Steinauer
MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Calcareous loamy till
Slope: 30 to 50 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 7e

Typical Profile:
H1—0 to 6 inches; clay loam
H2—6 to 18 inches; clay loam
H3—18 to 60 inches; clay loam

ThC—Thurman loamy fine sand, 3 to 6 percent slopes

Map Unit Composition

Thurman: 100 percent

Component Descriptions
Thurman
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Sandy eolian deposits
Slope: 3 to 6 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 10 inches; loamy fine sand
H2—10 to 16 inches; loamy fine sand
H3—16 to 60 inches; fine sand

TkD—Thurman-Monona complex, 6 to 11 percent slopes

Map Unit Composition

Thurman: 70 percent
Monona Variant: 30 percent

Component Descriptions
Thurman
MLRA: 102C - Loess Uplands
Landform: Hillslope on upland
Parent material: Sandy eolian deposits
Slope: 6 to 11 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sands - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 10 inches; loamy fine sand
H2—10 to 16 inches; loamy fine sand
H3—16 to 60 inches; fine sand

Monona Variant
MLRA: 102C - Loess Uplands
Landform: Hillslope on upland
Parent material: Fine-silty loess
Slope: 6 to 11 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.9 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
H1—0 to 13 inches; fine sandy loam
H2—13 to 60 inches; silt loam

UaF2—Uly silt loam, 11 to 15 percent slopes, Eroded

Map Unit Composition

Uly: 100 percent

Component Descriptions
Uly
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Fine-silty calcareous loess
Slope: 11 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 8 inches; silt loam
H2—8 to 23 inches; silt loam
H3—23 to 60 inches; silt loam

Minor Components
Kezan
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Wet Subirrigated - Veg. Zone 4

UbF—Uly-Coly silt loams, 15 to 30 percent slopes

Map Unit Composition

Uly: 60 percent
Coly: 40 percent

Component Descriptions
Uly
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Fine-silty calcareous loess
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 8 inches; silt loam
H2—8 to 23 inches; silt loam
H3—23 to 60 inches; silt loam

Coly
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Fine-silty calcareous loess
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 11.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 4 inches; silt loam
H2—4 to 60 inches; silt loam

Minor Components
Kezan
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Wet Subirrigated - Veg. Zone 4

UcF2—Uly-Coly silt loams, 15 to 25 percent slopes, Eroded

Map Unit Composition

Uly: 50 percent
Coly: 50 percent

Component Descriptions
Uly
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Fine-silty calcareous loess
Slope: 15 to 25 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 8 inches; silt loam
H2—8 to 23 inches; silt loam
H3—23 to 60 inches; silt loam

Coly
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Fine-silty calcareous loess
Slope: 15 to 25 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 4 inches; silt loam
H2—4 to 60 inches; silt loam

Minor Components
Kezan
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Wet Subirrigated - Veg. Zone 4

UhF2—Uly-Hobbs silt loams, 0 to 30 percent slopes, Eroded

Map Unit Composition

Uly: 70 percent
Hobbs: 30 percent

Component Descriptions
Uly
MLRA: 75 - Central Loess Plains
Landform: Hillslope on upland
Parent material: Fine-silty calcareous loess
Slope: 3 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium

Ecological site: Silty - Veg. Zone 4
Land capability (nonirrigated): 6e

Typical Profile:
H1—0 to 8 inches; silt loam
H2—8 to 23 inches; silt loam
H3—23 to 60 inches; silt loam

Hobbs
MLRA: 75 - Central Loess Plains
Landform: Flood plain on valley
Parent material: Stratified silty alluvium
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty Overflow - Veg. Zone 4
Land capability (irrigated): 2w
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 7 inches; silt loam
H2—7 to 25 inches; stratified silt loam
H3—25 to 60 inches; silt loam

Minor Components
Kezan
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Wet Subirrigated - Veg. Zone 4

UkC2—Uly Variant silty clay loam, 3 to 6 percent slopes, Eroded

Map Unit Composition

Uly Variant: 100 percent

Component Descriptions
Uly Variant
MLRA: 75 - Central Loess Plains
Landform: Terrace on river valley
Parent material: Fine-silty calcareous loess
Slope: 3 to 6 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Very high (About 12.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 4
Land capability (irrigated): 4s
Land capability (nonirrigated): 4s

Typical Profile:
H1—0 to 6 inches; silty clay loam
H2—6 to 15 inches; silty clay loam
H3—15 to 80 inches; silt loam

W—Water

Map Unit Composition

Water: 100 percent

Component Descriptions
Water
MLRA: 102C - Loess Uplands,106 - Nebraska and Kansas Loess-Drift Hills,75 - Central Loess Plains
Depth to seasonal water saturation: More than 6 feet

General Considerations: Water includes streams, lakes, ponds, and estuaries. These areas are covered with water in most years, at least during the period that is warm enough for plants to grow. Many areas are covered throughout the year.

WoB—Wood River silt loam, 1 to 3 percent slopes

Map Unit Composition

Wood River: 100 percent

Component Descriptions

Wood River
MLRA: 102C - Loess Uplands
Landform: Terrace on river valley
Parent material: Silty alluvium
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 11.1 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Saline Lowland - Veg. Zone 4
Land capability (irrigated): 3s
Land capability (nonirrigated): 4s

Typical Profile:
H1—0 to 9 inches; silt loam
H2—9 to 33 inches; silty clay
H3—33 to 60 inches; silt loam

Zk—Zook silt loam, Overwash, 0 to 2 percent slopes

Map Unit Composition

Zook: 100 percent

Component Descriptions
Zook
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Clayey alluvium
Slope: 0 to 2 percent
Drainage class: Poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 8.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 0 to 12 inches
Runoff class: High
Ecological site: Clayey Overflow - Veg. Zone 4
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 13 inches; silt loam
H2—13 to 60 inches; silty clay

Zo—Zook silty clay loam, 0 to 2 percent slopes

Map Unit Composition

Zook: 100 percent

Component Descriptions
Zook
MLRA: 102C - Loess Uplands
Landform: Flood plain on river valley
Parent material: Clayey alluvium
Slope: 0 to 2 percent
Drainage class: Poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 7.7 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 0 to 12 inches
Runoff class: High
Ecological site: Clayey Overflow - Veg. Zone 4
Land capability (nonirrigated): 2w

Typical Profile:
H1—0 to 6 inches; silty clay loam
H2—6 to 60 inches; silty clay

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS
Butler County, Nebraska

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive land-forming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes. In the capability system, soils are generally grouped at three levels: capability class, subclass, and unit.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

(Class 1) soils have slight limitations that restrict their use.

(Class 2) soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

(Class 3) soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

(Class 4) soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

(Class 5) soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

(Class 6) soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

(Class 7) soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

(Class 8) soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief. limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units" and in the Land Capability and Component Yields table.

Crop Yield Estimates

The average yields per acre that can be expected of the principal crops under a high level of management are shown in "Land Capibility and Component Yields" table. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, animal waste manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in this table, are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service (NRCS) or the Cooperative Extension Service (CES) can provide information about the management and productivity of the soils for those crops.

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Butler County, Nebraska
(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Grain sorghum		Soybeans		Winter wheat	
	N	I	N	I	N	I	N	I	N	I
AED: ARENTS, EARTHEN DAM----------	8	---	---	---	---	---	---	---	---	---
Af: ALDA----------	3w	3w	69.00	138.00	75.00	119.00	31.00	42.00	30.00	---
Ba: BARNEY----------	5w	---	---	---	---	---	---	---	---	---
Bd: BLENDON---------	2s	2e	75.00	149.00	69.00	124.00	33.00	44.00	35.00	---
BdC: BLENDON---------	3e	3e	75.00	149.00	69.00	124.00	33.00	44.00	35.00	---
Bf: BLENDON---------	2s	2e	81.00	154.00	75.00	130.00	35.00	46.00	40.00	---
MUIR----------	1	1	81.00	154.00	75.00	130.00	35.00	46.00	40.00	---
Bh: BOEL----------	3w	3w	46.00	123.00	52.00	103.00	---	---	26.00	---
Bn: BOEL----------	3w	3w	56.00	131.00	62.00	110.00	---	---	28.00	---
ALDA----------	3w	3w	56.00	131.00	62.00	110.00	---	---	28.00	---
Br: BROCKSBURG------	2e	2e	39.00	143.00	51.00	119.00	28.00	44.00	27.00	---
BsD: BURCHARD--------	3e	4e	67.00	99.00	75.00	97.00	24.00	37.00	30.00	---
BsE: BURCHARD--------	4e	---	52.00	---	55.00	---	---	---	23.00	---
BtE2: BURCHARD--------	4e	---	46.00	---	48.00	---	---	---	20.00	---
STEINAUER-------	4e	---	46.00	---	48.00	---	---	---	20.00	---
Bu: BUTLER----------	2w	2w	71.00	143.00	86.00	130.00	34.00	44.00	38.00	---
CfG: COLY----------	7e	---	---	---	---	---	---	---	---	---
CoB: COZAD----------	2e	2e	90.00	154.00	95.00	130.00	35.00	44.00	42.00	---
CrD2: CROFTON---------	4e	4e	61.00	94.00	52.00	54.00	---	---	24.00	---
CrE2: CROFTON---------	4e	---	46.00	---	44.00	---	---	---	24.00	---
CrF2: CROFTON---------	6e	---	---	---	---	---	---	---	---	---
CrG: CROFTON---------	7e	---	---	---	---	---	---	---	---	---
Fm: FILLMORE--------	3w	4w	57.00	116.00	69.00	119.00	---	---	30.00	---
Gb: GIBBON----------	2w	2w	92.00	143.00	98.00	130.00	37.00	46.00	37.00	---
GP: PITS----------	8s	---	---	---	---	---	---	---	---	---
Gr: GRIGSTON--------	1	1	103.00	160.00	98.00	135.00	42.00	53.00	45.00	---
Ha: HALL----------	1	1	98.00	160.00	98.00	135.00	40.00	53.00	45.00	---

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Butler County, Nebraska
(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Grain sorghum		Soybeans		Winter wheat	
	N	I	N	I	N	I	N	I	N	I
Hc: HASTINGS--------	1	1	93.00	160.00	98.00	135.00	37.00	50.00	45.00	---
HcB: HASTINGS--------	2e	2e	90.00	149.00	92.00	130.00	33.00	46.00	40.00	---
HcC: HASTINGS--------	3e	3e	81.00	143.00	89.00	124.00	31.00	45.00	38.00	---
HcD: HASTINGS--------	4e	4e	78.00	127.00	82.00	108.00	26.00	37.00	33.00	---
HdC2: HASTINGS--------	3e	3e	76.00	132.00	83.00	119.00	29.00	---	34.00	---
HdD2: HASTINGS--------	4e	4e	72.00	116.00	76.00	103.00	---	---	28.00	---
Hg: HOBBS----------	2w	2w	94.00	154.00	99.00	130.00	39.00	50.00	42.00	---
HhB: HOBBS----------	6w	---	---	---	---	---	---	---	---	---
HkB: HOLDER----------	2e	2e	91.00	154.00	95.00	130.00	35.00	50.00	42.00	---
INT: AQUOLLS---------	5w	---	---	---	---	---	---	---	---	---
IvC: INAVALE---------	6e	4e	---	110.00	---	86.00	---	---	---	---
IwC: INAVALE---------	6e	4e	---	99.00	48.00	81.00	---	---	---	---
BOEL----------	3w	3w	---	99.00	48.00	81.00	---	---	---	---
JuC: JUDSON----------	2e	3e	92.00	149.00	100.00	130.00	37.00	46.00	43.00	---
Kz: KEZAN----------	4w	---	37.00	---	39.00	---	---	---	---	---
La: LAMO----------	2w	2w	90.00	127.00	90.00	113.00	35.00	44.00	34.00	---
LoC2: LONGFORD--------	3e	3e	67.00	---	78.00	---	22.00	---	30.00	---
LoD2: LONGFORD--------	4e	4e	52.00	---	63.00	---	---	---	25.00	---
M-W: MISCELLANEOUS WATER----------	---	---	---	---	---	---	---	---	---	---
MnC: MONONA----------	2e	3e	86.00	143.00	98.00	124.00	33.00	42.00	37.00	---
MnD2: POHOCCO---------	3e	4e	69.00	127.00	83.00	113.00	28.00	---	33.00	---
MnE: MONONA----------	4e	---	67.00	---	75.00	---	---	---	27.00	---
MnF: MONONA----------	6e	---	---	---	---	---	---	---	---	---
Mu: MUIR----------	1	1	103.00	160.00	103.00	140.00	44.00	55.00	48.00	---
MuB: MUIR----------	2e	2e	94.00	154.00	98.00	135.00	36.00	46.00	43.00	---
Ob: OLBUT----------	3s	3s	55.00	94.00	63.00	86.00	---	---	25.00	---
BUTLER----------	2w	2w	55.00	94.00	63.00	86.00	---	---	25.00	---

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Butler County, Nebraska
(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Grain sorghum		Soybeans		Winter wheat	
	N	I	N	I	N	I	N	I	N	I
OvB:										
OVINA----------	3w	3w	63.00	138.00	63.00	113.00	---	---	25.00	---
OxC:										
OVINA----------	3w	3w	57.00	127.00	57.00	108.00	---	---	22.00	---
THURMAN---------	3e	3e	57.00	127.00	57.00	108.00	---	---	22.00	---
PaC2:										
PAWNEE----------	3e	4e	64.00	---	78.00	---	28.00	---	32.00	---
PaD2:										
PAWNEE----------	4e	---	55.00	---	69.00	---	---	---	25.00	---
PoC2:										
POHOCCO---------	2e	3e	81.00	132.00	86.00	124.00	33.00	42.00	38.00	---
PoD2:										
POHOCCO---------	3e	4e	71.00	121.00	75.00	108.00	---	---	32.00	---
PoE2:										
POHOCCO---------	4e	---	63.00	---	69.00	---	---	---	27.00	---
PsD2:										
POHOCCO---------	3e	4e	67.00	110.00	71.00	---	---	---	28.00	---
CROFTON---------	4e	4e	67.00	110.00	71.00	---	---	---	28.00	---
PsE2:										
POHOCCO---------	4e	---	61.00	---	63.00	---	---	---	24.00	---
CROFTON---------	4e	---	61.00	---	63.00	---	---	---	24.00	---
PsF2:										
POHOCCO---------	6e	---	---	---	---	---	---	---	---	---
CROFTON---------	6e	---	---	---	---	---	---	---	---	---
Sa:										
SALTINE---------	6s	---	56.00	88.00	61.00	81.00	22.00	---	26.00	---
GIBBON----------	2w	2w	56.00	88.00	61.00	81.00	22.00	---	26.00	---
Sc:										
SCOTT-----------	4w	---	---	---	35.00	---	---	---	18.00	---
Sh:										
AKSARBEN--------	1	1	95.00	160.00	101.00	135.00	42.00	50.00	43.00	---
ShC:										
AKSARBEN--------	2e	3e	90.00	143.00	97.00	124.00	35.00	44.00	46.00	---
ShC2:										
YUTAN-----------	2e	3e	81.00	138.00	87.00	119.00	33.00	---	38.00	---
ShD:										
AKSARBEN--------	3e	4e	78.00	127.00	86.00	113.00	30.00	---	35.00	---
ShD2:										
YUTAN-----------	3e	4e	76.00	121.00	83.00	108.00	25.00	---	33.00	---
Sk:										
SILVER CREEK----	4s	4s	46.00	---	63.00	---	23.00	---	28.00	---
SmB:										
SIMEON----------	4e	4e	---	121.00	32.00	97.00	---	---	---	---
StD2:										
STEINAUER-------	4e	---	---	---	46.00	---	---	---	24.00	---
StF:										
STEINAUER-------	6e	---	---	---	---	---	---	---	---	---
StG:										
STEINAUER-------	7e	---	---	---	---	---	---	---	---	---
ThC:										
THURMAN---------	4e	4e	57.00	105.00	57.00	97.00	---	---	25.00	---

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Butler County, Nebraska
(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Grain sorghum		Soybeans		Winter wheat	
	N	I	N	I	N	I	N	I	N	I
TkD:										
THURMAN	6e	4e	55.00	99.00	---	---	---	---	23.00	---
MONONA VARIANT	4e	4e	55.00	99.00	---	---	---	---	23.00	---
UaF2:										
ULY	6e	---	---	---	---	---	---	---	---	---
UbF:										
ULY	6e	---	---	---	---	---	---	---	---	---
COLY	6e	---	---	---	---	---	---	---	---	---
UcF2:										
COLY	6e	---	---	---	---	---	---	---	---	---
ULY	6e	---	---	---	---	---	---	---	---	---
UhF2:										
ULY	6e	---	---	---	---	---	---	---	---	---
HOBBS	2w	2w	---	---	---	---	---	---	---	---
UkC2:										
ULY VARIANT	4s	4s	47.00	88.00	60.00	83.00	---	---	25.00	---
W:										
WATER	---	---	---	---	---	---	---	---	---	---
WoB:										
WOOD RIVER	4s	3s	46.00	127.00	56.00	113.00	---	---	28.00	---
Zk:										
ZOOK	2w	---	97.00	138.00	94.00	124.00	40.00	50.00	38.00	---
Zo:										
ZOOK	2w	---	90.00	132.00	90.00	119.00	35.00	46.00	35.00	---

Farmland Classification
Butler County, Nebraska : Published

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in the following table. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in the "Acres and Proportionate Extent of Soils" table. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described in other tables in this document."

Map symbol	Mapunit name	Farmland Classification
Bd	Blendon fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
BdC	Blendon fine sandy loam, 2 to 6 percent slopes	All areas are prime farmland
Bf	Blendon-muir complex, 0 to 2 percent slopes	All areas are prime farmland
Br	Brocksburg sandy loam, 0 to 2 percent slopes	All areas are prime farmland
CoB	Cozad silt loam, 1 to 3 percent slopes	All areas are prime farmland
Gr	Grigston silt loam, 0 to 1 percent slopes	All areas are prime farmland
Ha	Hall silt loam, 0 to 1 percent slopes	All areas are prime farmland
Hc	Hastings silt loam, 0 to 1 percent slopes	All areas are prime farmland
HcB	Hastings silt loam, 1 to 3 percent slopes	All areas are prime farmland
HcC	Hastings silt loam, 3 to 6 percent slopes	All areas are prime farmland
HdC2	Hastings silty clay loam, 3 to 6 percent slopes, eroded	All areas are prime farmland
Hg	Hobbs silt loam, 0 to 1 percent slopes	All areas are prime farmland
HkB	Holder silt loam, 1 to 3 percent slopes	All areas are prime farmland
JuC	Judson silt loam, 2 to 6 percent slopes	All areas are prime farmland
LoC2	Longford silty clay loam, 2 to 6 percent slopes, eroded	All areas are prime farmland
MnC	Monona silt loam, 2 to 6 percent slopes	All areas are prime farmland
Mu	Muir silt loam, 0 to 1 percent slopes	All areas are prime farmland
MuB	Muir silt loam, 1 to 3 percent slopes	All areas are prime farmland
PaC2	Pawnee clay loam, 3 to 6 percent slopes, eroded	All areas are prime farmland
PoC2	Ponca silty clay loam, 2 to 6 percent slopes, eroded	All areas are prime farmland
Sh	Sharpsburg silty clay loam, 0 to 2 percent slopes	All areas are prime farmland
ShC	Sharpsburg silty clay loam, 2 to 6 percent slopes	All areas are prime farmland
ShC2	Sharpsburg silty clay loam, 2 to 6 percent slopes, eroded	All areas are prime farmland
WoB	Wood river silt loam, 1 to 3 percent slopes	All areas are prime farmland
Af	Alda fine sandy loam, 0 to 2 percent slopes	Prime farmland if drained
Bu	Butler silt loam, 0 to 1 percent slopes	Prime farmland if drained
Gb	Gibbon silty clay loam, 0 to 2 percent slopes	Prime farmland if drained
La	Lamo silty clay loam, 0 to 2 percent slopes	Prime farmland if drained
Zk	Zook silt loam, overwash, 0 to 2 percent slopes	Prime farmland if drained
Zo	Zook silty clay loam, 0 to 2 percent slopes	Prime farmland if drained

SOIL RATING FOR PLANT GROWTH, modified 1998
Butler County, Nebraska

The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
AED	Arents, Earthen Dam	0
Af	Alda Fine Sandy Loam, 0 To 2 Percent Slopes	30
Ba	Barney Loam, 0 To 2 Percent Slopes	24
Bd	Blendon Fine Sandy Loam, 0 To 2 Percent Slopes	63
BdC	Blendon Fine Sandy Loam, 2 To 6 Percent Slopes	61
Bf	Blendon-Muir Complex, 0 To 2 Percent Slopes	68
Bh	Boel Loam, 0 To 2 Percent Slopes	37
Bn	Boel-Alda Complex, 0 To 2 Percent Slopes	35
Br	Brocksburg Sandy Loam, 0 To 2 Percent Slopes	51
BsD	Burchard Loam, 6 To 11 Percent Slopes	65
BsE	Burchard Loam, 11 To 15 Percent Slopes	59
BtE2	Burchard-Steinauer Clay Loams, 11 To 15 Percent Slopes, Eroded	50
Bu	Butler Silt Loam, 0 To 1 Percent Slopes	72
CfG	Coly Silt Loam, 30 To 60 Percent Slopes	3
CoB	Cozad Silt Loam, 1 To 3 Percent Slopes	72
CrD2	Crofton Silt Loam, 6 To 11 Percent Slopes, Eroded	52
CrE2	Crofton Silt Loam, 11 To 17 Percent Slopes, Eroded	47
CrF2	Crofton Silt Loam, 17 To 30 Percent Slopes, Eroded	22
CrG	Crofton Silt Loam, 30 To 60 Percent Slopes	3
Fm	Fillmore Silt Loam, 0 To 1 Percent Slopes	34
GP	Gravel Pit	18
Gb	Gibbon Silty Clay Loam, 0 To 2 Percent Slopes	54
Gr	Grigston Silt Loam, 0 To 1 Percent Slopes	60
Ha	Hall Silt Loam, 0 To 1 Percent Slopes	77
Hc	Hastings Silt Loam, 0 To 1 Percent Slopes	75
HcB	Hastings Silt Loam, 1 To 3 Percent Slopes	74
HcC	Hastings Silt Loam, 3 To 6 Percent Slopes	71
HcD	Hastings Silt Loam, 6 To 11 Percent Slopes	66
HdC2	Hastings Silty Clay Loam, 3 To 6 Percent Slopes, Eroded	72
HdD2	Hastings Silty Clay Loam, 6 To 11 Percent Slopes, Eroded	67
Hg	Hobbs Silt Loam, 0 To 1 Percent Slopes	70
HhB	Hobbs Silt Loam, Channeled, 0 To 2 Percent Slopes	55
HkB	Holder Silt Loam, 1 To 3 Percent Slopes	79
INT	Aquolls	12
IvC	Inavale Loamy Sand, 2 To 6 Percent Slopes	32
IwC	Inavale-Boel Complex, 0 To 6 Percent Slopes	32
JuC	Judson Silt Loam, 2 To 6 Percent Slopes	77
Kz	Kezan Silt Loam, 0 To 2 Percent Slopes	52
La	Lamo Silty Clay Loam, 0 To 2 Percent Slopes	53
LoC2	Longford Silty Clay Loam, 2 To 6 Percent Slopes, Eroded	70
LoD2	Longford Silty Clay Loam, 6 To 11 Percent Slopes, Eroded	64
M-W	Miscellaneous Water (sewage Lagoon)	0
MnC	Monona Silt Loam, 2 To 6 Percent Slopes	76
MnD2	Monona Silt Loam, 6 To 11 Percent Slopes, Eroded	64
MnE	Monona Silt Loam, 11 To 17 Percent Slopes	62
MnF	Monona Silt Loam, 17 To 30 Percent Slopes	29
Mu	Muir Silt Loam, 0 To 1 Percent Slopes	75
MuB	Muir Silt Loam, 1 To 3 Percent Slopes	75
Ob	Olbut-Butler Silt Loams, 0 To 1 Percent Slopes	58
OvB	Ovina Loamy Fine Sand, 0 To 3 Percent Slopes	50
OxC	Ovina-Thurman Complex, 0 To 6 Percent Slopes	42
PaC2	Pawnee Clay Loam, 3 To 6 Percent Slopes, Eroded	54
PaD2	Pawnee Clay Loam, 6 To 11 Percent Slopes, Eroded	50
PoC2	Ponca Silty Clay Loam, 2 To 6 Percent Slopes, Eroded	69
PoD2	Ponca Silty Clay Loam, 6 To 11 Percent Slopes, Eroded	63
PoE2	Ponca Silty Clay Loam, 11 To 17 Percent Slopes, Eroded	57
PsD2	Ponca-Crofton Complex, 6 To 11 Percent Slopes, Eroded	59
PsE2	Ponca-Crofton Complex, 11 To 17 Percent Slopes, Eroded	53
PsF2	Ponca-Crofton Complex, 17 To 30 Percent Slopes, Eroded	25
Sa	Saltine-Gibbon Silt Loams, 0 To 1 Percent Slopes	31
Sc	Scott Silt Loam, 0 To 1 Percent Slopes	16
Sh	Sharpsburg Silty Clay Loam, 0 To 2 Percent Slopes	71
ShC	Sharpsburg Silty Clay Loam, 2 To 6 Percent Slopes	69
ShC2	Sharpsburg Silty Clay Loam, 2 To 6 Percent Slopes, Eroded	72
ShD	Sharpsburg Silty Clay Loam, 6 To 11 Percent Slopes	63
ShD2	Sharpsburg Silty Clay Loam, 6 To 11 Percent Slopes, Eroded	66
Sk	Silver Creek Complex, 0 To 2 Percent Slopes	55
SmB	Simeon Loamy Sand, 0 To 3 Percent Slopes	30
StD2	Steinauer Clay Loam, 6 To 11 Percent Slopes, Eroded	45
StF	Steinauer Clay Loam, 11 To 30 Percent Slopes	27
StG	Steinauer Clay Loam, 30 To 50 Percent Slopes	3
ThC	Thurman Loamy Fine Sand, 3 To 6 Percent Slopes	33
TkD	Thurman-Monona Complex, 6 To 11 Percent Slopes	42
UaF2	Uly Silt Loam, 11 To 15 Percent Slopes, Eroded	60
UbF	Uly-Coly Silt Loams, 15 To 30 Percent Slopes	29
UcF2	Uly-Coly Silt Loams, 15 To 25 Percent Slopes, Eroded	38
UhF2	Uly-Hobbs Silt Loams, 0 To 30 Percent Slopes, Eroded	57
UkC2	Uly Variant Silty Clay Loam, 3 To 6 Percent Slopes, Eroded	50
W	Water	0
WoB	Wood River Silt Loam, 1 To 3 Percent Slopes	18
Zk	Zook Silt Loam, Overwash, 0 To 2 Percent Slopes	53

SOIL RATING FOR PLANT GROWTH, modified 1998
Butler County, Nebraska

The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
Zo	Zook Silty Clay Loam, 0 To 2 Percent Slopes	50

Butler County, Nebraska: Published
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
AED:ARENTS, EARTHEN DAM----	100	N/A	8	Not prime farmland		Unspecified		---	---	-	---	---
Af:ALDA---------	100	3w-	3w	Prime farmland if drained	C	Subirrigated - Veg. Zone 4		.20	.20	4	3	86
Ba:BARNEY-------	100	N/A	5w	Not prime farmland	D	Wet Land - Veg. Zone 4		.28	.28	5	4L	86
Bd:BLENDON------	100	2e-	2s	All areas are prime farmland	B	Sandy - Veg. Zone 4		.20	.20	5	3	86
BdC:BLENDON-----	100	3e-	3e	All areas are prime farmland	B	Sandy - Veg. Zone 4		.20	.20	5	3	86
Bf:BLENDON------	60	2e-	2s	All areas are prime farmland	B	Sandy - Veg. Zone 4		.20	.20	5	3	86
Bf:MUIR---------	40	1-	1	All areas are prime farmland	B	Silty Lowland - Veg. Zone 4		.32	.32	5	6	48
Bh:BOEL---------	100	3w-	3w	Not prime farmland	A	Subirrigated - Veg. Zone 4		.28	.28	3	4L	86
Bn:BOEL---------	55	3w-	3w	Not prime farmland	A	Subirrigated - Veg. Zone 4		.28	.28	3	4L	86
Bn:ALDA---------	45	3w-	3w	Not prime farmland	C	Subirrigated - Veg. Zone 4		.20	.20	4	3	86
Br:BROCKSBURG---	100	2e-	2e	All areas are prime farmland	B	Silty - Veg. Zone 4		.20	.20	4	3	86
BsD:BURCHARD----	100	4e-	3e	Not prime farmland	B	Silty - Veg. Zone 4		.28	.28	5	6	48
BsE:BURCHARD----	100	N/A	4e	Not prime farmland	B	Silty - Veg. Zone 4		.28	.28	5	6	48
BtE2:BURCHARD---	50	N/A	4e	Not prime farmland	B	Silty - Veg. Zone 4		.28	.28	5	6	48
BtE2:STEINAUER--	50	N/A	4e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.32	.32	5	4L	86
Bu:BUTLER-------	100	2w-	2w	Prime farmland if drained	D	Clayey - Veg. Zone 4		.37	.37	3	6	48
CfG:COLY--------	100	N/A	7e	Not prime farmland	B	Thin Loess - Veg. Zone 4		.43	.43	5	4L	86
CoB:COZAD-------	100	2e-	2e	All areas are prime farmland	B	Silty Lowland - Veg. Zone 4		.32	.32	5	6	48

Butler County, Nebraska: Published
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
CrD2:CROFTON----	100	4e-	4e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.43	.43	5	4L	86
CrE2:CROFTON----	100	N/A	4e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.43	.43	5	4L	86
CrF2:CROFTON----	100	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.43	.43	5	4L	86
CrG:CROFTON-----	100	N/A	7e	Not prime farmland	B	Thin Loess - Veg. Zone 4		.43	.43	5	4L	86
Fm:FILLMORE-----	100	4w-	3w	Not prime farmland	D	Clayey Overflow - Veg. Zone 4		.37	.37	3	6	48
GP:PITS---------	100	N/A	8s	Not prime farmland	A	Unspecified		.10	.17	2	8	0
Gb:GIBBON-------	100	2w-	2w	Prime farmland if drained	B	Subirrigated - Veg. Zone 4		.32	.32	5	4L	86
Gr:GRIGSTON-----	100	1-	1	All areas are prime farmland	B	Silty Lowland - Veg. Zone 4		.32	.32	5	6	48
Ha:HALL---------	100	1-	1	All areas are prime farmland	B	Silty Lowland - Veg. Zone 4		.32	.32	5	6	48
Hc:HASTINGS-----	100	1-	1	All areas are prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48
HcB:HASTINGS----	100	2e-	2e	All areas are prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48
HcC:HASTINGS----	100	3e-	3e	All areas are prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48
HcD:HASTINGS----	100	4e-	4e	Not prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48
HdC2:HASTINGS---	100	3e-	3e	All areas are prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	7	38
HdD2:HASTINGS---	100	4e-	4e	Not prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	7	38
Hg:HOBBS--------	100	2w-	2w	All areas are prime farmland	B	Silty Overflow - Veg. Zone 4		.32	.32	5	6	48
HhB:HOBBS-------	100	N/A	6w	Not prime farmland	B	Silty Overflow - Veg. Zone 4		.32	.32	5	6	48
HkB:HOLDER------	100	2e-	2e	All areas are prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48

Butler County, Nebraska: Published
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
INT:AQUOLLS-----	100	N/A	5w	Not prime farmland	C	Unspecified		---	---	-	---	0
IvC:INAVALE-----	100	4e-	6e	Not prime farmland	A	Sandy Lowland - Veg. Zone 4		.17	.17	5	2	134
IwC:INAVALE-----	65	4e-	6e	Not prime farmland	A	Sandy Lowland - Veg. Zone 4		.17	.17	5	2	134
IwC:BOEL--------	35	3w-	3w	Not prime farmland	A	Subirrigated - Veg. Zone 4		.20	.20	3	3	86
JuC:JUDSON------	100	3e-	2e	All areas are prime farmland	B	Silty - Veg. Zone 4		.28	.28	5	6	48
Kz:KEZAN--------	100	N/A	4w	Not prime farmland	D	Wet Subirrigated - Veg. Zone 4		.32	.32	5	6	48
La:LAMO---------	100	2w-	2w	Prime farmland if drained	C	Subirrigated - Veg. Zone 4		.32	.32	5	4L	86
LoC2:LONGFORD---	100	3e-	3e	All areas are prime farmland	C	Clayey - Veg. Zone 4		.32	.32	5	7	38
LoD2:LONGFORD---	100	4e-	4e	Not prime farmland	C	Clayey - Veg. Zone 4		.32	.32	5	7	38
M-W:MISCELLANEOUS WATER----------	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	---
MnC:MONONA------	100	3e-	2e	All areas are prime farmland	B	Silty - Veg. Zone 4		.28	.28	5	6	48
MnD2:POHOCCO----	100	4e-	3e	Not prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	6	48
MnE:MONONA------	100	N/A	4e	Not prime farmland	B	Silty - Veg. Zone 4		.28	.28	5	6	48
MnF:MONONA------	100	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 4		.28	.28	5	6	48
Mu:MUIR---------	100	1-	1	All areas are prime farmland	B	Silty Lowland - Veg. Zone 4		.32	.32	5	6	48
MuB:MUIR--------	100	2e-	2e	All areas are prime farmland	B	Silty Lowland - Veg. Zone 4		.32	.32	5	6	48
Ob:OLBUT--------	65	3s-	3s	Not prime farmland	D	Saline Lowland - Veg. Zone 4		.37	.37	3	6	48
Ob:BUTLER-------	35	2w-	2w	Not prime farmland	D	Clayey - Veg. Zone 4		.37	.37	3	6	48

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
OvB:OVINA-------	100	3w-	3w	Not prime farmland	B	Subirrigated - Veg. Zone 4		.17	.17	5	2	134
OxC:OVINA-------	50	3w-	3w	Not prime farmland	B	Subirrigated - Veg. Zone 4		.17	.17	5	2	134
OxC:THURMAN-----	50	3e-	3e	Not prime farmland	A	Sandy - Veg. Zone 4		.17	.17	5	2	134
PaC2:PAWNEE-----	100	4e-	3e	All areas are prime farmland	D	Clayey - Veg. Zone 4		.37	.37	5	4	86
PaD2:PAWNEE-----	100	N/A	4e	Not prime farmland	D	Clayey - Veg. Zone 4		.37	.37	5	4	86
PoC2:POHOCCO----	100	3e-	2e	All areas are prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	7	38
PoD2:POHOCCO----	100	4e-	3e	Not prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	7	38
PoE2:POHOCCO----	100	N/A	4e	Not prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	7	38
PsD2:POHOCCO----	65	4e-	3e	Not prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	7	38
PsD2:CROFTON----	35	4e-	4e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.43	.43	5	4L	86
PsE2:POHOCCO----	65	N/A	4e	Not prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	7	38
PsE2:CROFTON----	35	N/A	4e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.43	.43	5	4L	86
PsF2:POHOCCO----	65	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	7	38
PsF2:CROFTON----	35	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.43	.43	5	4L	86
Sa:SALTINE------	60	N/A	6s	Not prime farmland	C	Saline Subirrigated - Veg. Zone 4		.37	.37	5	4L	86
Sa:GIBBON-------	40	2w-	2w	Not prime farmland	B	Subirrigated - Veg. Zone 4		.32	.32	5	4L	86
Sc:SCOTT--------	100	N/A	4w	Not prime farmland	D	Clayey Overflow - Veg. Zone 4		.37	.37	3	6	48
Sh:AKSARBEN-----	100	1-	1	All areas are prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	7	38
ShC:AKSARBEN----	100	3e-	2e	All areas are prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	7	38

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
ShC2:YUTAN------	100	3e-	2e	All areas are prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	4	86
ShD:AKSARBEN----	100	4e-	3e	Not prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	7	38
ShD2:YUTAN------	100	4e-	3e	Not prime farmland	B	Silty - Veg. Zone 4		.37	.37	5	4	86
Sk:SILVER CREEK-	100	4s-	4s	Not prime farmland	D	Saline Subirrigated - Veg. Zone 4		.32	.32	2	6	48
SmB:SIMEON------	100	4e-	4e	Not prime farmland	A	Sandy - Veg. Zone 4		.17	.17	5	2	134
StD2:STEINAUER--	100	N/A	4e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.32	.32	5	4L	86
StF:STEINAUER---	100	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.32	.32	5	4L	86
StG:STEINAUER---	100	N/A	7e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.32	.32	5	4L	86
ThC:THURMAN-----	100	4e-	4e	Not prime farmland	A	Sandy - Veg. Zone 4		.17	.17	5	2	134
TkD:THURMAN-----	70	4e-	6e	Not prime farmland	A	Sands - Veg. Zone 4		.17	.17	5	2	134
TkD:MONONA VARIANT--------	30	4e-	4e	Not prime farmland	B	Silty - Veg. Zone 4		.20	.20	4	3	86
UaF2:ULY--------	100	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48
UbF:ULY---------	60	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48
UbF:COLY--------	40	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.43	.43	5	4L	86
UcF2:ULY--------	50	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48
UcF2:COLY-------	50	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 4		.43	.43	5	4L	86
UhF2:ULY--------	70	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 4		.32	.32	5	6	48
UhF2:HOBBS------	30	2w-	2w	Not prime farmland	B	Silty Overflow - Veg. Zone 4		.32	.32	5	6	48
UkC2:ULY VARIANT	100	4s-	4s	Not prime farmland	C	Silty - Veg. Zone 4		.37	.37	5	7	38
W:WATER---------	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	0

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
WoB:WOOD RIVER--	100	3s-	4s	All areas are prime farmland	D	Saline Lowland - Veg. Zone 4		.37	.37	2	6	48
Zk:ZOOK---------	100	N/A	2w	Prime farmland if drained	C/D	Clayey Overflow - Veg. Zone 4		.37	.37	4	6	48
Zo:ZOOK---------	100	N/A	2w	Prime farmland if drained	C/D	Clayey Overflow - Veg. Zone 4		.37	.37	5	7	38

RANGELAND PRODUCTIVITY
Butler County, Nebraska

Use and Explanation of Rangeland, Grazed Forest Land, Native Pastureland Interpretations

Information in this subsection can be used to plan the use and management of soils for rangeland, grazed forest land, and native pasture. Different kinds of soils vary in their capacity to produce native grasses and other plants suitable for grazing. Information in this subsection provides groupings of similar soils and estimates of potential forage production, which can be used to determine livestock stocking rates.

Rangeland. Range is land on which the native vegetation (climax or natural potential plant community) is predominantly grasses, grasslike plants, forbs, and shrubs suitable for grazing and browsing. Range includes natural grasslands, savannas, many wetlands, some deserts, tundra, and certain shrub and forb communities. Rangeland receives no regular or frequent cultural treatment. The composition and production of the plant community are determined by soil, climate, topography, overstory canopy, and grazing management.

Grazed Forest Land. Includes land on which the understory includes, as an integral part of the forest plant community, plants that can be grazed without significantly impairing other forest values.

Native Pasture. Includes land on which the native vegetation (climax or natural potential plant community) is forest but which is used and managed primarily for production of native plants for forage. Native pasture includes cut-over forest land and forest land cleared and now managed for native or naturalized forage plants.

Rangeland

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management based on the relationship between the soils and vegetation and water.

The Rangeland, Grazed Forest land, Native Pastureland Interpretations shows, for each soil that supports rangeland vegetation, the ecological site and the potential annual production of vegetation in favorable, normal, unfavorable years. An explanation of the column headings in this table follows.

An ecological site is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of a site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Total dry-weight production is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, average, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Range management requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the National Range and Pasture Handbook, which is available in local offices of the Natural Resources Conservation Service. The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

RANGELAND PRODUCTIVITY--Continued
Butler County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
AED:				
Arents, Earthen Dam	---	---	---	---
Af:				
Alda	Subirrigated - Veg. Zone 4	5,900	5,500	5,100
Ba:				
Barney	Wet Land - Veg. Zone 4	6,000	5,700	5,500
Bd:				
Blendon	Sandy - Veg. Zone 4	4,300	3,600	2,600
BdC:				
Blendon	Sandy - Veg. Zone 4	4,300	3,600	2,600
Bf:				
Blendon	Sandy - Veg. Zone 4	4,300	3,600	2,600
Muir	Silty Lowland - Veg. Zone 4	7,500	5,500	4,000
Bh:				
Boel	Subirrigated - Veg. Zone 4	5,900	5,500	5,100
Bn:				
Boel	Subirrigated - Veg. Zone 4	5,900	5,500	5,100
Alda	Subirrigated - Veg. Zone 4	5,900	5,500	5,100
Br:				
Brocksburg	Silty - Veg. Zone 4	3,300	3,000	2,600
BsD:				
Burchard	Silty - Veg. Zone 4	4,400	3,900	3,500
BsE:				
Burchard	Silty - Veg. Zone 4	4,400	3,900	3,500
BtE2:				
Burchard	Silty - Veg. Zone 4	4,400	3,900	3,500
Steinauer	Limy Upland - Veg. Zone 4	4,000	3,100	2,500
Bu:				
Butler	Clayey - Veg. Zone 4	4,500	4,100	3,700
CfG:				
Coly	Thin Loess - Veg. Zone 4	3,500	3,300	3,000
CoB:				
Cozad	Silty Lowland - Veg. Zone 4	5,300	4,900	4,500
CrD2:				
Crofton	Limy Upland - Veg. Zone 4	4,000	3,600	3,200
CrE2:				
Crofton	Limy Upland - Veg. Zone 4	4,000	3,600	3,200
CrF2:				
Crofton	Limy Upland - Veg. Zone 4	4,000	3,600	3,200
CrG:				
Crofton	Thin Loess - Veg. Zone 4	3,500	3,300	3,000
Fm:				
Fillmore	Clayey Overflow - Veg. Zone 4	3,800	3,300	2,800
Gb:				
Gibbon	Subirrigated - Veg. Zone 4	6,300	5,900	5,500
GP:				
Pits	---	---	---	---
Gr:				
Grigston	Silty Lowland - Veg. Zone 4	5,000	4,000	3,000
Ha:				
Hall	Silty Lowland - Veg. Zone 4	4,500	4,200	3,800
Hc:				
Hastings	Silty - Veg. Zone 4	4,800	4,400	4,000
HcB:				
Hastings	Silty - Veg. Zone 4	4,800	4,400	4,000
HcC:				
Hastings	Silty - Veg. Zone 4	4,800	4,400	4,000
HcD:				
Hastings	Silty - Veg. Zone 4	4,800	4,400	4,000
HdC2:				
Hastings	Silty - Veg. Zone 4	4,800	3,900	3,000
HdD2:				
Hastings	Silty - Veg. Zone 4	4,800	3,900	3,000
Hg:				
Hobbs	Silty Overflow - Veg. Zone 4	4,700	4,200	4,000
HhB:				
Hobbs	Silty Overflow - Veg. Zone 4	4,700	4,200	4,000
HkB:				
Holder	Silty - Veg. Zone 4	4,800	4,400	4,000
INT:				
Aquolls	---	---	---	---
IvC:				
Inavale	Sandy Lowland - Veg. Zone 4	4,000	3,300	2,500
IwC:				
Inavale	Sandy Lowland - Veg. Zone 4	4,000	3,300	2,500
Boel	Subirrigated - Veg. Zone 4	5,900	5,500	5,100
JuC:				
Judson	Silty - Veg. Zone 4	4,800	3,900	3,000
Kz:				
Kezan	Wet Subirrigated - Veg. Zone 4	5,900	5,500	5,100
La:				
Lamo	Subirrigated - Veg. Zone 4	6,300	5,500	4,700
LoC2:				
Longford	Clayey - Veg. Zone 4	5,500	4,000	3,000
LoD2:				

RANGELAND PRODUCTIVITY--Continued
Butler County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Longford	Clayey - Veg. Zone 4	5,500	4,000	3,000
M-W:				
Miscellaneous Water	---	---	---	---
MnC:				
Monona	Silty - Veg. Zone 4	4,000	3,600	3,200
MnD2:				
Pohocco	Silty - Veg. Zone 4	4,200	3,600	3,000
MnE:				
Monona	Silty - Veg. Zone 4	4,000	3,600	3,200
MnF:				
Monona	Silty - Veg. Zone 4	4,000	3,600	3,200
Mu:				
Muir	Silty Lowland - Veg. Zone 4	7,500	5,500	4,000
MuB:				
Muir	Silty Lowland - Veg. Zone 4	7,500	5,500	4,000
Ob:				
Olbut	Saline Lowland - Veg. Zone 4	2,600	2,400	2,100
Butler	Clayey - Veg. Zone 4	4,500	4,100	3,700
OvB:				
Ovina	Subirrigated - Veg. Zone 4	6,300	5,900	5,500
OxC:				
Ovina	Subirrigated - Veg. Zone 4	6,300	5,900	5,500
Thurman	Sandy - Veg. Zone 4	4,000	3,700	3,500
PaC2:				
Pawnee	Clayey - Veg. Zone 4	3,700	3,200	2,700
PaD2:				
Pawnee	Clayey - Veg. Zone 4	3,700	3,200	2,700
PoC2:				
Pohocco	Silty - Veg. Zone 4	4,200	3,600	3,000
PoD2:				
Pohocco	Silty - Veg. Zone 4	4,200	3,600	3,000
PoE2:				
Pohocco	Silty - Veg. Zone 4	4,200	3,600	3,000
PsD2:				
Pohocco	Silty - Veg. Zone 4	4,200	3,600	3,000
Crofton	Limy Upland - Veg. Zone 4	4,000	3,600	3,200
PsE2:				
Pohocco	Silty - Veg. Zone 4	4,200	3,600	3,000
Crofton	Limy Upland - Veg. Zone 4	4,000	3,600	3,200
PsF2:				
Pohocco	Silty - Veg. Zone 4	4,200	3,600	3,000
Crofton	Limy Upland - Veg. Zone 4	4,000	3,600	3,200
Sa:				
Saltine	Saline Subirrigated - Veg. Zone 4	4,300	3,900	3,500
Gibbon	Subirrigated - Veg. Zone 4	6,300	5,900	5,500
Sc:				
Scott	Clayey Overflow - Veg. Zone 4	3,900	3,300	2,300
Sh:				
Aksarben	Silty - Veg. Zone 4	4,500	4,000	3,500
ShC:				
Aksarben	Silty - Veg. Zone 4	4,500	4,000	3,500
ShC2:				
Yutan	Silty - Veg. Zone 4	4,400	3,900	3,400
ShD:				
Aksarben	Silty - Veg. Zone 4	4,500	4,000	3,500
ShD2:				
Yutan	Silty - Veg. Zone 4	4,400	3,900	3,400
Sk:				
Silver Creek	Saline Subirrigated - Veg. Zone 4	4,300	3,900	3,500
SmB:				
Simeon	Sandy - Veg. Zone 4	3,000	2,700	2,400
StD2:				
Steinauer	Limy Upland - Veg. Zone 4	4,000	3,100	2,500
StF:				
Steinauer	Limy Upland - Veg. Zone 4	4,000	3,100	2,500
StG:				
Steinauer	Limy Upland - Veg. Zone 4	4,000	3,100	2,500
ThC:				
Thurman	Sandy - Veg. Zone 4	4,000	3,700	3,500
TkD:				
Thurman	Sands - Veg. Zone 4	4,000	3,700	3,500
Monona Variant	Silty - Veg. Zone 4	3,900	3,500	3,000
UaF2:				
Uly	Silty - Veg. Zone 4	3,700	3,200	2,700
UbF:				
Uly	Silty - Veg. Zone 4	3,700	3,200	2,700
Coly	Limy Upland - Veg. Zone 4	4,000	3,600	3,200
UcF2:				
Coly	Limy Upland - Veg. Zone 4	4,000	3,600	3,200
Uly	Silty - Veg. Zone 4	3,700	3,200	2,700
UhF2:				
Uly	Silty - Veg. Zone 4	3,700	3,200	2,700
Hobbs	Silty Overflow - Veg. Zone 4	4,700	4,200	4,000

RANGELAND PRODUCTIVITY--Continued
Butler County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
UkC2:				
Uly Variant	Silty - Veg. Zone 4	3,800	3,000	1,700
W:				
Water	---	---	---	---
WoB:				
Wood River	Saline Lowland - Veg. Zone 4	3,000	2,400	1,700
Zk:				
Zook	Clayey Overflow - Veg. Zone 4	3,500	3,100	2,700
Zo:				
Zook	Clayey Overflow - Veg. Zone 4	3,500	3,100	2,700

BUILDING SITE DEVELOPMENT
Butler County, Nebraska

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. These tables show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AED:							
Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Af:							
Alda----------	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
Ba:							
Barney----------	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Bd:							
Blendon----------	100	Not limited		Not limited		Not limited	
BdC:							
Blendon----------	100	Not limited		Not limited		Somewhat limited	
						Slope	0.00
Bf:							
Blendon----------	60	Not limited		Not limited		Not limited	
Muir----------	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.35		
Bh:							
Boel----------	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
Bn:							
Boel----------	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
Alda----------	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
Br:							
Brocksburg----------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BsD:							
Burchard----------	100	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
BsE:							
Burchard----------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BtE2:							
Burchard----------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Steinauer----------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Bu:							
Butler----------	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	1.00	Shrink-swell	1.00	Depth to saturated zone	1.00
CfG:							
Coly----------	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
CoB:							
Cozad----------	100	Not limited		Not limited		Not limited	
CrD2:							
Crofton----------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
CrE2:							
Crofton----------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
CrF2:							
Crofton----------	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CrG:							
Crofton	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fm:							
Fillmore	100	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
Gb:							
Gibbon	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
GP:							
Pits	100	Not rated		Not rated		Not rated	
Gr:							
Grigston	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.35		
Ha:							
Hall	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Hc:							
Hastings	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
HcB:							
Hastings	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
HcC:							
Hastings	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	0.12
HcD:							
Hastings	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
HdC2:							
Hastings	100	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
						Slope	0.12
HdD2:							
Hastings	100	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
Hg:							
Hobbs	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
HhB:							
Hobbs	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
HkB:							
Holder	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
INT:							
Aquolls	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
IvC:							
Inavale	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.35	Slope	0.12
IwC:							
Inavale	65	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.12
Boel	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
JuC:							
Judson	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.00
Kz:							
Kezan	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
La:							
Lamo	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
LoC2:							
Longford	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	0.00
LoD2:							
Longford	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
M-W:							
Miscellaneous Water-	100	Not rated		Not rated		Not rated	
MnC:							
Monona	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.00
MnD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
MnE:							
Monona	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
MnF:							
Monona	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Mu:							
Muir	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.35		
MuB:							
Muir	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.35		
Ob:							
Olbut	65	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	1.00	Shrink-swell	0.50	Depth to saturated zone	1.00
Butler	35	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	1.00	Shrink-swell	1.00	Depth to saturated zone	1.00
OvB:							
Ovina	100	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
OxC:							
Ovina	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
Thurman	50	Not limited		Not limited		Not limited	

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PaC2:							
Pawnee	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
						Slope	0.12
PaD2:							
Pawnee	100	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
PoC2:							
Pohocco	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.00
PoD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
PoE2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
PsD2:							
Pohocco	65	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Crofton	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
PsE2:							
Pohocco	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Crofton	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
PsF2:							
Pohocco	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Crofton	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Sa:							
Saltine	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.07	Shrink-swell	0.50	Depth to saturated zone	0.07
Gibbon	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
Sc:							
Scott	100	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Sh:							
Aksarben	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
ShC:							
Aksarben	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.00
ShC2:							
Yutan	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.00
ShD:							
Aksarben	100	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ShD2:							
Yutan	100	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Sk:							
Silver Creek	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.35		
SmB:							
Simeon	100	Not limited		Not limited		Not limited	
StD2:							
Steinauer	100	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
StF:							
Steinauer	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
StG:							
Steinauer	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
ThC:							
Thurman	100	Not limited		Not limited		Somewhat limited	
						Slope	0.12
TkD:							
Thurman	70	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Monona Variant	30	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
UaF2:							
Uly	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
UbF:							
Uly	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Coly	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
UcF2:							
Coly	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Uly	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
UhF2:							
Uly	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Hobbs	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
UkC2:							
Uly Variant	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
W:							
Water	100	Not rated		Not rated		Not rated	
WoB:							
Wood River	100	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
Zk:							
Zook	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Zo:							
Zook	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AED:							
Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Af:							
Alda----------	100	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Flooding	0.60
		Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Depth to saturated zone	0.03	Flooding	0.60		
Ba:							
Barney----------	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Flooding	0.80	Droughty	0.33
				Depth to dense layer	0.50		
Bd:							
Blendon----------	100	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
BdC:							
Blendon----------	100	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Bf:							
Blendon----------	60	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Muir----------	40	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.35		
		Flooding	0.40	Cutbanks cave	0.10		
Bh:							
Boel----------	100	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Depth to saturated zone	0.03	Flooding	0.60		
Bn:							
Boel----------	55	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Depth to saturated zone	0.03	Flooding	0.60		
Alda----------	45	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Flooding	0.60
		Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Depth to saturated zone	0.03	Flooding	0.60		
Br:							
Brocksburg----------	100	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
BsD:							
Burchard----------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	0.10	Slope	0.04
		Frost action	0.50	Slope	0.04		
		Slope	0.04				
BsE:							
Burchard----------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
BtE2:							
Burchard----------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
Steinauer----------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Bu:							
Butler	100	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Shrink-swell	1.00	Too clayey	0.50		
		Depth to saturated zone	0.94	Cutbanks cave	0.10		
CfG:							
Coly	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
CoB:							
Cozad	100	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
CrD2:							
Crofton	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Slope	0.04		
CrE2:							
Crofton	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Frost action	0.50	Cutbanks cave	0.10		
CrF2:							
Crofton	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
CrG:							
Crofton	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Fm:							
Fillmore	100	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.50		
		Shrink-swell	1.00	Cutbanks cave	0.10		
Gb:							
Gibbon	100	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Flooding	1.00	Flooding	0.60	Depth to saturated zone	0.03
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Depth to saturated zone	0.03				
GP:							
Pits	100	Not rated		Not rated		Not rated	
Gr:							
Grigston	100	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.35		
		Flooding	0.40	Cutbanks cave	0.10		
Ha:							
Hall	100	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
Hc:							
Hastings	100	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
HcB:							
Hastings	100	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
HcC:							
Hastings	100	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
HcD:							
Hastings	100	Very limited		Somewhat limited		Somewhat limited	
		Shrink-swell	1.00	Cutbanks cave	0.10	Slope	0.04
		Frost action	0.50	Slope	0.04		
		Slope	0.04				

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HdC2:							
Hastings	100	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
HdD2:							
Hastings	100	Very limited		Somewhat limited		Somewhat limited	
		Shrink-swell	1.00	Cutbanks cave	0.10	Slope	0.04
		Frost action	0.50	Slope	0.04		
		Slope	0.04				
Hg:							
Hobbs	100	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Frost action	0.50	Cutbanks cave	0.10		
HhB:							
Hobbs	100	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.80	Flooding	1.00
		Frost action	0.50	Cutbanks cave	0.10		
HkB:							
Holder	100	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
INT:							
Aquolls	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
				Cutbanks cave	0.10		
IvC:							
Inavale	100	Somewhat limited		Very limited		Somewhat limited	
		Flooding	0.40	Cutbanks cave	1.00	Droughty	0.10
				Depth to saturated zone	0.35		
IwC:							
Inavale	65	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
				Flooding	0.60	Droughty	0.10
Boel	35	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Depth to saturated zone	0.03	Flooding	0.60		
JuC:							
Judson	100	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Kz:							
Kezan	100	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
La:							
Lamo	100	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Flooding	1.00	Flooding	0.60	Depth to saturated zone	0.19
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
LoC2:							
Longford	100	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
LoD2:							
Longford	100	Very limited		Somewhat limited		Somewhat limited	
		Shrink-swell	1.00	Cutbanks cave	0.10	Slope	0.04
		Frost action	0.50	Slope	0.04		
		Slope	0.04				
M-W:							
Miscellaneous Water-	100	Not rated		Not rated		Not rated	

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MnC:							
Monona	100	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
MnD2:							
Pohocco	100	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
MnE:							
Monona	100	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.96	Slope	0.96
		Slope	0.96	Cutbanks cave	0.10		
		Shrink-swell	0.50				
MnF:							
Monona	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Mu:							
Muir	100	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.35		
		Flooding	0.40	Cutbanks cave	0.10		
MuB:							
Muir	100	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.35		
		Flooding	0.40	Cutbanks cave	0.10		
Ob:							
Olbut	65	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Sodium content	1.00
		Shrink-swell	1.00	Too clayey	0.28	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Cutbanks cave	0.10		
Butler	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Shrink-swell	1.00	Too clayey	0.50		
		Depth to saturated zone	0.94	Cutbanks cave	0.10		
OvB:							
Ovina	100	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
OxC:							
Ovina	50	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
Thurman	50	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.20
PaC2:							
Pawnee	100	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.19	Too clayey	0.04		
PaD2:							
Pawnee	100	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Shrink-swell	1.00	Cutbanks cave	0.10	Slope	0.04
		Depth to saturated zone	0.19	Too clayey	0.04		
		Slope	0.04	Slope	0.04		
PoC2:							
Pohocco	100	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PoD2:							
Pohocco	100	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
PoE2:							
Pohocco	100	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.96	Slope	0.96
		Slope	0.96	Cutbanks cave	0.10		
		Shrink-swell	0.50				
PsD2:							
Pohocco	65	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Crofton	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Slope	0.04		
PsE2:							
Pohocco	65	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.96	Slope	0.96
		Slope	0.96	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Crofton	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Frost action	0.50	Cutbanks cave	0.10		
PsF2:							
Pohocco	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Crofton	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Sa:							
Saltine	60	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Sodium content	1.00
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to saturated zone	0.03
		Depth to saturated zone	0.03			Salinity	0.00
Gibbon	40	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Flooding	1.00	Flooding	0.60	Depth to saturated zone	0.03
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Depth to saturated zone	0.03				
Sc:							
Scott	100	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.28		
		Shrink-swell	1.00	Cutbanks cave	0.10		
Sh:							
Aksarben	100	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
ShC:							
Aksarben	100	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
ShC2:							
Yutan	100	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
ShD:							
Aksarben	100	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ShD2:							
Yutan	100	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Sk:							
Silver Creek	100	Very limited		Very limited		Not limited	
		Frost action	1.00	Cutbanks cave	1.00		
		Flooding	0.40	Depth to saturated zone	0.35		
				Too clayey	0.01		
SmB:							
Simeon	100	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.09
StD2:							
Steinauer	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	0.10	Slope	0.04
		Frost action	0.50	Slope	0.04		
		Slope	0.04				
StF:							
Steinauer	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
StG:							
Steinauer	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
ThC:							
Thurman	100	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.20
TkD:							
Thurman	70	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	1.00	Droughty	0.20
				Slope	0.04	Slope	0.04
Monona Variant	30	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
UaF2:							
Uly	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
		Frost action	0.50	Cutbanks cave	0.10		
UbF:							
Uly	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Coly	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
UcF2:							
Coly	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Uly	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
UhF2:							
Uly	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Hobbs	30	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Frost action	0.50	Cutbanks cave	0.10		
UkC2:							
Uly Variant	100	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
W:							
Water	100	Not rated		Not rated		Not rated	
WoB:							
Wood River	100	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Cutbanks cave	0.10	Sodium content	1.00

BUILDING SITE DEVELOPMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Zk:							
Zook	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00	Too clayey	0.00		
Zo:							
Zook	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00	Too clayey	0.00		

CONSTRUCTION MATERIALS
Butler County, Nebraska

Construction Materials

These tables give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated good, fair, or poor as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

The soils are rated as a probable or improbable source of sand and gravel. A rating of probable means that the source material is likely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. The number 0.00 indicates that the soil is an improbable source. A number between 0.00 and 1.00 indicates the degree to which the soil is a probable source of sand or gravel.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the first table, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
AED:					
Arents, Earthen Dam-	100	Not rated		Not rated	
Af:					
Alda----------	100	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.98
Ba:					
Barney----------	100	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00		
Bd:					
Blendon----------	100	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00		
BdC:					
Blendon----------	100	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00		
Bf:					
Blendon----------	60	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00		
Muir----------	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Bh:					
Boel----------	100	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00		
Bn:					
Boel----------	55	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00		
Alda----------	45	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.98
Br:					
Brocksburg----------	100	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00		
BsD:					
Burchard----------	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BsE:					
Burchard----------	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BtE2:					
Burchard----------	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Steinauer----------	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Bu:					
Butler----------	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
CfG:					
Coly	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CoB:					
Cozad	100	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.06
CrD2:					
Crofton	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CrE2:					
Crofton	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CrF2:					
Crofton	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CrG:					
Crofton	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Fm:					
Fillmore	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Gb:					
Gibbon	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
GP:					
Pits	100	Not rated		Not rated	
Gr:					
Grigston	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ha:					
Hall	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hc:					
Hastings	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HcB:					
Hastings	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HcC:					
Hastings	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HcD:					
Hastings	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HdC2:					
Hastings	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
HdD2:					
Hastings	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hg:					
Hobbs	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HhB:					
Hobbs	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HkB:					
Holder	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
INT:					
Aquolls	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
IvC:					
Inavale	100	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.98
		Thickest layer	0.00	Thickest layer	0.98
IwC:					
Inavale	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.98
		Thickest layer	0.00	Thickest layer	0.98
Boel	35	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00		
JuC:					
Judson	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kz:					
Kezan	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
La:					
Lamo	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
LoC2:					
Longford	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
LoD2:					
Longford	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
M-W:					
Miscellaneous Water	100	Not rated		Not rated	
MnC:					
Monona	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MnD2:					
Pohocco	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
MnE:					
Monona	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MnF:					
Monona	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mu:					
Muir	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MuB:					
Muir	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ob:					
Olbut	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Butler	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
OvB:					
Ovina	100	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.65
OxC:					
Ovina	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.65
Thurman	50	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.49
		Thickest layer	0.00		
PaC2:					
Pawnee	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PaD2:					
Pawnee	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PoC2:					
Pohocco	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PoD2:					
Pohocco	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PoE2:					
Pohocco	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PsD2:					
Pohocco	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crofton	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
PsE2:					
Pohocco	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crofton	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PsF2:					
Pohocco	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crofton	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sa:					
Saltine	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Gibbon	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sc:					
Scott	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sh:					
Aksarben	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ShC:					
Aksarben	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ShC2:					
Yutan	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ShD:					
Aksarben	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ShD2:					
Yutan	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sk:					
Silver Creek	100	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.49
SmB:					
Simeon	100	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.33
		Thickest layer	0.00	Bottom layer	0.91
StD2:					
Steinauer	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
StF:					
Steinauer	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
StG:					
Steinauer	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ThC:					
Thurman	100	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.49
		Thickest layer	0.00		
TkD:					
Thurman	70	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.49
		Thickest layer	0.00		
Monona Variant	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.09
UaF2:					
Uly	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
UbF:					
Uly	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Coly	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
UcF2:					
Coly	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Uly	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
UhF2:					
Uly	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hobbs	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
UkC2:					
Uly Variant	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
W:					
Water	100	Not rated		Not rated	
WoB:					
Wood River	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Zk:					
Zook	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Zo:					
Zook	100	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AED:							
Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Af:							
Alda	100	Fair		Fair		Fair	
		Low content of organic matter	0.12	Depth to saturated zone	0.76	Depth to saturated zone	0.76
		Droughty	0.92			Sodium content	0.98
		Sodium content	0.97				
Ba:							
Barney	100	Poor		Poor		Poor	
		Too sandy	0.00	Depth to saturated zone	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12			Too sandy	0.00
		Droughty	0.16			Depth to saturated zone	0.00
Bd:							
Blendon	100	Good		Good		Good	
BdC:							
Blendon	100	Good		Good		Good	
Bf:							
Blendon	60	Good		Good		Good	
Muir	40	Fair		Good		Good	
		Low content of organic matter	0.12				
Bh:							
Boel	100	Poor		Fair		Poor	
		Too sandy	0.00	Depth to saturated zone	0.76	Too sandy	0.00
		Low content of organic matter	0.12			Depth to saturated zone	0.76
Bn:							
Boel	55	Poor		Fair		Poor	
		Too sandy	0.00	Depth to saturated zone	0.76	Too sandy	0.00
		Low content of organic matter	0.12			Depth to saturated zone	0.76
Alda	45	Fair		Fair		Fair	
		Low content of organic matter	0.12	Depth to saturated zone	0.76	Depth to saturated zone	0.76
		Droughty	0.92			Sodium content	0.98
		Sodium content	0.97				
Br:							
Brocksburg	100	Fair		Fair		Fair	
		Droughty	0.86	No shrink-swell limitation	0.99	Hard to reclaim	0.92
BsD:							
Burchard	100	Fair		Fair		Fair	
		Low content of organic matter	0.88	Shrink-swell	0.87	Too Clayey	0.70
		Too clayey	0.98			Slope	0.96
		No water erosion limitation	0.99				
BsE:							
Burchard	100	Fair		Fair		Fair	
		Low content of organic matter	0.88	Shrink-swell	0.87	Slope	0.16
		Too clayey	0.98			Too Clayey	0.70
		No water erosion limitation	0.99				

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BtE2:							
Burchard	50	Fair		Fair		Fair	
		Low content of organic matter	0.88	Shrink-swell	0.87	Slope	0.16
		Too clayey	0.98			Too Clayey	0.70
		No water erosion limitation	0.99				
Steinauer	50	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.87	Slope	0.16
		No water erosion limitation	0.99				
Bu:							
Butler	100	Poor		Fair		Poor	
		Too clayey	0.00	Depth to saturated zone	0.04	Too Clayey	0.00
		Too acid	0.84	Shrink-swell	0.47	Depth to saturated zone	0.04
		No water erosion limitation	0.99				
CfG:							
Coly	100	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
		Water erosion	0.90				
CoB:							
Cozad	100	Fair		Good		Good	
		Low content of organic matter	0.12				
		Water erosion	0.90				
CrD2:							
Crofton	100	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.96
		Water erosion	0.90				
CrE2:							
Crofton	100	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.04
		Water erosion	0.90				
CrF2:							
Crofton	100	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.02	Slope	0.00
		Water erosion	0.90				
CrG:							
Crofton	100	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Water erosion	0.90				
Fm:							
Fillmore	100	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Too Clayey	0.00
		Low content of organic matter	0.12	Shrink-swell	0.59	Depth to saturated zone	0.00
		Too acid	0.84				
		Water erosion	0.90				
Gb:							
Gibbon	100	Fair		Fair		Fair	
		Low content of organic matter	0.88	Depth to saturated zone	0.76	Depth to saturated zone	0.76
GP:							
Pits	100	Not rated		Not rated		Not rated	

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Gr:							
Grigston	100	Fair		Good		Good	
		Low content of organic matter	0.12				
Ha:							
Hall	100	Fair		Fair		Good	
		Water erosion	0.90	Shrink-swell	0.87		
Hc:							
Hastings	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.39	Too Clayey	0.03
		Low content of organic matter	0.88				
		Water erosion	0.90				
		Too acid	0.95				
HcB:							
Hastings	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.39	Too Clayey	0.03
		Low content of organic matter	0.88				
		Water erosion	0.90				
		Too acid	0.95				
HcC:							
Hastings	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.39	Too Clayey	0.03
		Low content of organic matter	0.88				
		Water erosion	0.90				
		Too acid	0.95				
HcD:							
Hastings	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.39	Too Clayey	0.03
		Low content of organic matter	0.88			Slope	0.96
		Water erosion	0.90				
		Too acid	0.95				
HdC2:							
Hastings	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.64	Too Clayey	0.03
		Low content of organic matter	0.88				
		Water erosion	0.90				
		Too acid	0.95				
HdD2:							
Hastings	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.64	Too Clayey	0.03
		Low content of organic matter	0.88			Slope	0.96
		Water erosion	0.90				
		Too acid	0.95				
Hg:							
Hobbs	100	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
HhB:							
Hobbs	100	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
HkB:							
Holder	100	Fair		Fair		Fair	
		Water erosion	0.90	Shrink-swell	0.90	Too Clayey	0.79
		Too clayey	0.95				
		Too acid	0.97				
INT:							
Aquolls	100	Poor		Poor		Poor	
		Low content of organic matter	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
IvC:							
Inavale	100	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Low content of organic matter	0.12				
		Droughty	0.87				
IwC:							
Inavale	65	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Low content of organic matter	0.12				
		Droughty	0.87				
Boel	35	Poor		Fair		Poor	
		Too sandy	0.00	Depth to saturated zone	0.76	Too sandy	0.00
		Low content of organic matter	0.12			Depth to saturated zone	0.76
JuC:							
Judson	100	Fair		Fair		Good	
		Water erosion	0.90	Shrink-swell	0.96		
Kz:							
Kezan	100	Fair		Fair		Fair	
		Low content of organic matter	0.12	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Water erosion	0.90				
La:							
Lamo	100	Fair		Fair		Fair	
		Low content of organic matter	0.88	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Water erosion	0.90	Shrink-swell	0.87		
LoC2:							
Longford	100	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.26	Too Clayey	0.00
		Too acid	0.97				
LoD2:							
Longford	100	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.26	Too Clayey	0.00
		Too acid	0.97			Slope	0.96
M-W:							
Miscellaneous Water-	100	Not rated		Not rated		Not rated	
MnC:							
Monona	100	Fair		Fair		Good	
		Water erosion	0.90	Shrink-swell	0.99		
MnD2:							
Pohocco	100	Fair		Fair		Fair	
		Low content of organic matter	0.88	Shrink-swell	0.87	Slope	0.96
		Water erosion	0.90				
MnE:							
Monona	100	Fair		Fair		Fair	
		Water erosion	0.90	Shrink-swell	0.99	Slope	0.04
MnF:							
Monona	100	Fair		Fair		Poor	
		Water erosion	0.90	Slope	0.02	Slope	0.00
				Shrink-swell	0.99		
Mu:							
Muir	100	Fair		Good		Good	
		Low content of organic matter	0.12				
MuB:							
Muir	100	Fair		Good		Good	
		Low content of organic matter	0.12				

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ob:							
Olbut	65	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Too Clayey	0.00
		Low content of organic matter	0.12	Shrink-swell	0.60	Depth to saturated zone	0.00
		Water erosion	0.90			Salinity	0.50
		Sodium content	0.97			Sodium content	0.98
Butler	35	Poor		Fair		Poor	
		Too clayey	0.00	Depth to saturated zone	0.04	Too Clayey	0.00
		Too acid	0.84	Shrink-swell	0.47	Depth to saturated zone	0.04
		No water erosion limitation	0.99				
OvB:							
Ovina	100	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Low content of organic matter	0.88				
OxC:							
Ovina	50	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Low content of organic matter	0.88				
Thurman	50	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Low content of organic matter	0.12				
		Droughty	0.71				
PaC2:							
Pawnee	100	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.12	Too Clayey	0.00
		Low content of organic matter	0.50	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		No water erosion limitation	0.99				
PaD2:							
Pawnee	100	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.12	Too Clayey	0.00
		Low content of organic matter	0.50	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		No water erosion limitation	0.99			Slope	0.96
PoC2:							
Pohocco	100	Fair		Fair		Good	
		Low content of organic matter	0.12	Shrink-swell	0.87		
		Water erosion	0.90				
PoD2:							
Pohocco	100	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.87	Slope	0.96
		Water erosion	0.90				
PoE2:							
Pohocco	100	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.87	Slope	0.04
		Water erosion	0.90				
PsD2:							
Pohocco	65	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.87	Slope	0.96
		Water erosion	0.90				

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Crofton	35	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.96
		Water erosion	0.90				
PsE2:							
Pohocco	65	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.87	Slope	0.04
		Water erosion	0.90				
Crofton	35	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.04
		Water erosion	0.90				
PsF2:							
Pohocco	65	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.02	Slope	0.00
		Water erosion	0.90	Shrink-swell	0.87		
Crofton	35	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.02	Slope	0.00
		Water erosion	0.90				
Sa:							
Saltine	60	Poor		Fair		Poor	
		Sodium content	0.00	Depth to saturated zone	0.76	Sodium content	0.00
		Too alkaline	0.00	Shrink-swell	0.87	Salinity	0.00
		Low content of organic matter	0.12			Depth to saturated zone	0.76
		Salinity	0.88				
		Water erosion	0.90				
Gibbon	40	Fair		Fair		Fair	
		Low content of organic matter	0.88	Depth to saturated zone	0.76	Depth to saturated zone	0.76
Sc:							
Scott	100	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Too Clayey	0.00
		Too acid	0.84	Shrink-swell	0.25	Depth to saturated zone	0.00
		Water erosion	0.90				
Sh:							
Aksarben	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.87	Too Clayey	0.04
		Too acid	0.84				
		Water erosion	0.90				
ShC:							
Aksarben	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.87	Too Clayey	0.04
		Too acid	0.84				
		Water erosion	0.90				
ShC2:							
Yutan	100	Fair		Fair		Fair	
		Too clayey	0.12	Shrink-swell	0.87	Too Clayey	0.09
		Too acid	0.84				
		Low content of organic matter	0.88				
		Water erosion	0.90				
ShD:							
Aksarben	100	Fair		Fair		Fair	
		Too clayey	0.05	Shrink-swell	0.87	Too Clayey	0.04
		Too acid	0.84			Slope	0.96
		Water erosion	0.90				

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ShD2:							
Yutan	100	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.87	Too Clayey	0.09
		Too clayey	0.12			Slope	0.96
		Too acid	0.84				
		Water erosion	0.90				
Sk:							
Silver Creek	100	Fair		Good		Good	
		Low content of organic matter	0.12				
SmB:							
Simeon	100	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Low content of organic matter	0.12				
		Droughty	0.88				
StD2:							
Steinauer	100	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.87	Slope	0.96
		No water erosion limitation	0.99				
StF:							
Steinauer	100	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.32	Slope	0.00
		No water erosion limitation	0.99	Shrink-swell	0.87		
StG:							
Steinauer	100	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		No water erosion limitation	0.99	Shrink-swell	0.87		
ThC:							
Thurman	100	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Low content of organic matter	0.12				
		Droughty	0.71				
TkD:							
Thurman	70	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Slope	0.96
		Low content of organic matter	0.12				
		Droughty	0.71				
Monona Variant	30	Fair		Fair		Fair	
		Low content of organic matter	0.88	Shrink-swell	0.90	Slope	0.96
		Water erosion	0.90				
UaF2:							
Uly	100	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.16
		Water erosion	0.90				
UbF:							
Uly	60	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.08	Slope	0.00
		Water erosion	0.90				
Coly	40	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.08	Slope	0.00
		Water erosion	0.90				

CONSTRUCTION MATERIALS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UcF2:							
Coly	50	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.50	Slope	0.00
		Water erosion	0.90				
Uly	50	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.50	Slope	0.00
		Water erosion	0.90				
UhF2:							
Uly	70	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.92	Slope	0.00
		Water erosion	0.90				
Hobbs	30	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
UkC2:							
Uly Variant	100	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.82	Sodium content	0.78
		Sodium content	0.78				
		No water erosion limitation	0.99				
W:							
Water	100	Not rated		Not rated		Not rated	
WoB:							
Wood River	100	Poor		Fair		Poor	
		Sodium content	0.00	Shrink-swell	0.53	Sodium content	0.00
		Too clayey	0.00			Too Clayey	0.00
		Low content of organic matter	0.12			Salinity	0.50
		Water erosion	0.90				
Zk:							
Zook	100	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		No water erosion limitation	0.99	Shrink-swell	0.16	Too Clayey	0.00
Zo:							
Zook	100	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		No water erosion limitation	0.99	Shrink-swell	0.12	Too Clayey	0.00

RECREATIONAL INTERPRETATIONS
Butler County, Nebraska

Recreation

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AED:							
Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Af:							
Alda	100	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.03	Flooding	0.60
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
Ba:							
Barney	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Flooding	0.40	Depth to saturated zone	1.00
Bd:							
Blendon	100	Not limited		Not limited		Not limited	
BdC:							
Blendon	100	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Bf:							
Blendon	60	Not limited		Not limited		Not limited	
Muir	40	Very limited		Not limited		Not limited	
		Flooding	1.00				
Bh:							
Boel	100	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.03	Flooding	0.60
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
Bn:							
Boel	55	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.03	Flooding	0.60
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
Alda	45	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.03	Flooding	0.60
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
Br:							
Brocksburg	100	Not limited		Not limited		Not limited	
BsD:							
Burchard	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.15	Restricted permeability	0.15	Slope	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.15
BsE:							
Burchard	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
BtE2:							
Burchard	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
Steinauer	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
Bu:							
Butler	100	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Restricted permeability	0.94	Depth to saturated zone	1.00
		Restricted permeability	0.94	Depth to saturated zone	0.94	Restricted permeability	0.94
CfG:							
Coly	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
CoB:							
Cozad	100	Not limited		Not limited		Somewhat limited	
						Slope	0.00
CrD2:							
Crofton	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
CrE2:							
Crofton	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CrF2:							
Crofton	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
CrG:							
Crofton	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fm:							
Fillmore	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
Gb:							
Gibbon	100	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Restricted permeability	0.15	Flooding	0.60
		Restricted permeability	0.15	Depth to saturated zone	0.03	Restricted permeability	0.15
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
GP:							
Pits	100	Not rated		Not rated		Not rated	
Gr:							
Grigston	100	Very limited		Not limited		Not limited	
		Flooding	1.00				
Ha:							
Hall	100	Not limited		Not limited		Not limited	
Hc:							
Hastings	100	Not limited		Not limited		Not limited	
HcB:							
Hastings	100	Not limited		Not limited		Somewhat limited	
						Slope	0.00
HcC:							
Hastings	100	Not limited		Not limited		Somewhat limited	
						Slope	0.87
HcD:							
Hastings	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
HdC2:							
Hastings	100	Not limited		Not limited		Somewhat limited	
						Slope	0.87
HdD2:							
Hastings	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Hg:							
Hobbs	100	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
HhB:							
Hobbs	100	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
HkB:							
Holder	100	Not limited		Not limited		Somewhat limited	
						Slope	0.00
INT:							
Aquolls	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Restricted permeability	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
IvC:							
Inavale	100	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.87	Slope	0.87
		Too sandy	0.87			Too sandy	0.87
IwC:							
Inavale	65	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.87	Slope	0.87
		Too sandy	0.87			Too sandy	0.87
						Flooding	0.60
Boel	35	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.03	Flooding	0.60
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
JuC:							
Judson	100	Not limited		Not limited		Somewhat limited	
						Slope	0.50

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Kz:							
Kezan	100	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
La:							
Lamo	100	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.19	Flooding	0.60
		Depth to saturated zone	0.39	Restricted permeability	0.15	Depth to saturated zone	0.39
		Restricted permeability	0.15			Restricted permeability	0.15
LoC2:							
Longford	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.39	Restricted permeability	0.39	Slope	0.50
						Restricted permeability	0.39
LoD2:							
Longford	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.39	Restricted permeability	0.39	Slope	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.39
M-W:							
Miscellaneous Water	100	Not rated		Not rated		Not rated	
MnC:							
Monona	100	Not limited		Not limited		Somewhat limited	
						Slope	0.50
MnD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
MnE:							
Monona	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
MnF:							
Monona	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Mu:							
Muir	100	Very limited		Not limited		Not limited	
		Flooding	1.00				
MuB:							
Muir	100	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Slope	0.00
Ob:							
Olbut	65	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Sodium content	1.00	Depth to saturated zone	1.00
		Sodium content	1.00	Depth to saturated zone	1.00	Sodium content	1.00
		Restricted permeability	0.94	Restricted permeability	0.94	Restricted permeability	0.94
Butler	35	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Restricted permeability	0.94	Depth to saturated zone	1.00
		Restricted permeability	0.94	Depth to saturated zone	0.94	Restricted permeability	0.94
OvB:							
Ovina	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.00
OxC:							
Ovina	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.13
Thurman	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
						Slope	0.13
PaC2:							
Pawnee	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.87

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Depth to saturated zone	0.39
PaD2:							
Pawnee	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Restricted permeability	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
PoC2:							
Pohocco	100	Not limited		Not limited		Somewhat limited	
						Slope	0.50
PoD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
PoE2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
PsD2:							
Pohocco	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Crofton	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
PsE2:							
Pohocco	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Crofton	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
PsF2:							
Pohocco	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Crofton	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Sa:							
Saltine	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Sodium content	1.00	Sodium content	1.00
		Sodium content	1.00	Depth to saturated zone	0.03	Flooding	0.60
		Depth to saturated zone	0.07	Salinity	0.00	Depth to saturated zone	0.07
		Salinity	0.00			Salinity	0.00
Gibbon	40	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.03	Flooding	0.60
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
Sc:							
Scott	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
Sh:							
Aksarben	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
ShC:							
Aksarben	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.15	Restricted permeability	0.15	Slope	0.50
						Restricted permeability	0.15
ShC2:							
Yutan	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.15	Restricted permeability	0.15	Slope	0.50
						Restricted permeability	0.15
ShD:							
Aksarben	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.15	Restricted permeability	0.15	Slope	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.15
ShD2:							
Yutan	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.15	Restricted permeability	0.15	Slope	1.00

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Slope	0.04	Slope	0.04	Restricted permeability	0.15
Sk:							
Silver Creek--------	100	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Restricted permeability	0.94	Restricted permeability	0.94
		Restricted permeability	0.94				
SmB:							
Simeon--------------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.72	Too sandy	0.72	Too sandy	0.72
						Slope	0.00
StD2:							
Steinauer-----------	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.15	Restricted permeability	0.15	Slope	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.15
StF:							
Steinauer-----------	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
StG:							
Steinauer-----------	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
ThC:							
Thurman-------------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Slope	0.87
						Too sandy	0.87
TkD:							
Thurman-------------	70	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.87	Too sandy	0.87	Slope	1.00
		Slope	0.04	Slope	0.04	Too sandy	0.87
Monona Variant------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
UaF2:							
Uly-----------------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
UbF:							
Uly-----------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Coly----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
UcF2:							
Coly----------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Uly-----------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
UhF2:							
Uly-----------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Hobbs---------------	30	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
						Slope	0.00
UkC2:							
Uly Variant---------	100	Not limited		Not limited		Somewhat limited	
						Slope	0.87
W:							
Water---------------	100	Not rated		Not rated		Not rated	
WoB:							
Wood River----------	100	Very limited		Very limited		Very limited	
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Restricted permeability	0.39	Restricted permeability	0.39	Restricted permeability	0.39
						Slope	0.00
Zk:							
Zook----------------	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Restricted permeability	0.94	Restricted permeability	0.94
		Restricted permeability	0.94			Flooding	0.60
Zo:							
Zook----------------	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Flooding	1.00	Restricted permeability	0.94	Restricted permeability	0.94
		Restricted permeability	0.94			Flooding	0.60

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AED:					
Arents, Earthen Dam-	100	Not rated		Not rated	
Af:					
Alda----------	100	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.03
Ba:					
Barney----------	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Depth to saturated zone	1.00
				Droughty	0.33
Bd:					
Blendon----------	100	Not limited		Not limited	
BdC:					
Blendon----------	100	Not limited		Not limited	
Bf:					
Blendon----------	60	Not limited		Not limited	
Muir----------	40	Not limited		Not limited	
Bh:					
Boel----------	100	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.03
Bn:					
Boel----------	55	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.03
Alda----------	45	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.03
Br:					
Brocksburg----------	100	Not limited		Not limited	
BsD:					
Burchard----------	100	Not limited		Somewhat limited	
				Slope	0.04
BsE:					
Burchard----------	100	Not limited		Somewhat limited	
				Slope	0.84
BtE2:					
Burchard----------	50	Not limited		Somewhat limited	
				Slope	0.84
Steinauer----------	50	Not limited		Somewhat limited	
				Slope	0.84
Bu:					
Butler----------	100	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.94
CfG:					
Coly----------	100	Very limited		Very limited	
		Slope	1.00	Slope	1.00
CoB:					
Cozad----------	100	Not limited		Not limited	
CrD2:					
Crofton----------	100	Not limited		Somewhat limited	
				Slope	0.04
CrE2:					
Crofton----------	100	Not limited		Somewhat limited	
				Slope	0.96
CrF2:					
Crofton----------	100	Somewhat limited		Very limited	
		Slope	0.98	Slope	1.00
CrG:					
Crofton----------	100	Very limited		Very limited	
		Slope	1.00	Slope	1.00
Fm:					
Fillmore----------	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
Gb:					
Gibbon----------	100	Not limited		Somewhat limited	
				Flooding	0.60

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
				Depth to saturated zone	0.03
GP:					
Pits	100	Not rated		Not rated	
Gr:					
Grigston	100	Not limited		Not limited	
Ha:					
Hall	100	Not limited		Not limited	
Hc:					
Hastings	100	Not limited		Not limited	
HcB:					
Hastings	100	Not limited		Not limited	
HcC:					
Hastings	100	Not limited		Not limited	
HcD:					
Hastings	100	Not limited		Somewhat limited	
				Slope	0.04
HdC2:					
Hastings	100	Not limited		Not limited	
HdD2:					
Hastings	100	Not limited		Somewhat limited	
				Slope	0.04
Hg:					
Hobbs	100	Not limited		Somewhat limited	
				Flooding	0.60
HhB:					
Hobbs	100	Somewhat limited		Very limited	
		Flooding	0.40	Flooding	1.00
HkB:					
Holder	100	Not limited		Not limited	
INT:					
Aquolls	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
IvC:					
Inavale	100	Somewhat limited		Somewhat limited	
		Too sandy	0.87	Droughty	0.10
IwC:					
Inavale	65	Somewhat limited		Somewhat limited	
		Too sandy	0.87	Flooding	0.60
				Droughty	0.10
Boel	35	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.03
JuC:					
Judson	100	Not limited		Not limited	
Kz:					
Kezan	100	Somewhat limited		Very limited	
		Flooding	0.40	Flooding	1.00
				Depth to saturated zone	0.19
La:					
Lamo	100	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.19
LoC2:					
Longford	100	Not limited		Not limited	
LoD2:					
Longford	100	Not limited		Somewhat limited	
				Slope	0.04
M-W:					
Miscellaneous Water-	100	Not rated		Not rated	
MnC:					
Monona	100	Not limited		Not limited	
MnD2:					
Pohocco	100	Not limited		Somewhat limited	
				Slope	0.04
MnE:					
Monona	100	Not limited		Somewhat limited	
				Slope	0.96
MnF:					
Monona	100	Somewhat limited		Very limited	

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Slope	0.98	Slope	1.00
Mu:					
Muir	100	Not limited		Not limited	
MuB:					
Muir	100	Not limited		Not limited	
Ob:					
Olbut	65	Very limited		Very limited	
		Depth to saturated zone	1.00	Sodium content	1.00
				Depth to saturated zone	1.00
Butler	35	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.94
OvB:					
Ovina	100	Somewhat limited		Somewhat limited	
		Too sandy	0.95	Depth to saturated zone	0.19
OxC:					
Ovina	50	Somewhat limited		Somewhat limited	
		Too sandy	0.95	Depth to saturated zone	0.19
Thurman	50	Somewhat limited		Somewhat limited	
		Too sandy	0.87	Droughty	0.20
PaC2:					
Pawnee	100	Not limited		Somewhat limited	
				Depth to saturated zone	0.19
PaD2:					
Pawnee	100	Not limited		Somewhat limited	
				Depth to saturated zone	0.19
				Slope	0.04
PoC2:					
Pohocco	100	Not limited		Not limited	
PoD2:					
Pohocco	100	Not limited		Somewhat limited	
				Slope	0.04
PoE2:					
Pohocco	100	Not limited		Somewhat limited	
				Slope	0.96
PsD2:					
Pohocco	65	Not limited		Somewhat limited	
				Slope	0.04
Crofton	35	Not limited		Somewhat limited	
				Slope	0.04
PsE2:					
Pohocco	65	Not limited		Somewhat limited	
				Slope	0.96
Crofton	35	Not limited		Somewhat limited	
				Slope	0.96
PsF2:					
Pohocco	65	Somewhat limited		Very limited	
		Slope	0.98	Slope	1.00
Crofton	35	Somewhat limited		Very limited	
		Slope	0.98	Slope	1.00
Sa:					
Saltine	60	Not limited		Very limited	
				Sodium content	1.00
				Flooding	0.60
				Depth to saturated zone	0.03
				Salinity	0.00
Gibbon	40	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.03
Sc:					
Scott	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
Sh:					
Aksarben	100	Not limited		Not limited	
ShC:					
Aksarben	100	Not limited		Not limited	
ShC2:					
Yutan	100	Not limited		Not limited	
ShD:					
Aksarben	100	Not limited		Somewhat limited	

RECREATIONAL INTERPRETATIONS--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
				Slope	0.04
ShD2:					
Yutan	100	Not limited		Somewhat limited	
				Slope	0.04
Sk:					
Silver Creek	100	Not limited		Not limited	
SmB:					
Simeon	100	Somewhat limited		Somewhat limited	
		Too sandy	0.72	Droughty	0.09
StD2:					
Steinauer	100	Not limited		Somewhat limited	
				Slope	0.04
StF:					
Steinauer	100	Somewhat limited		Very limited	
		Slope	0.68	Slope	1.00
StG:					
Steinauer	100	Very limited		Very limited	
		Slope	1.00	Slope	1.00
ThC:					
Thurman	100	Somewhat limited		Somewhat limited	
		Too sandy	0.87	Droughty	0.20
TkD:					
Thurman	70	Somewhat limited		Somewhat limited	
		Too sandy	0.87	Droughty	0.20
				Slope	0.04
Monona Variant	30	Not limited		Somewhat limited	
				Slope	0.04
UaF2:					
Uly	100	Not limited		Somewhat limited	
				Slope	0.84
UbF:					
Uly	60	Somewhat limited		Very limited	
		Slope	0.92	Slope	1.00
Coly	40	Somewhat limited		Very limited	
		Slope	0.92	Slope	1.00
UcF2:					
Coly	50	Somewhat limited		Very limited	
		Slope	0.50	Slope	1.00
Uly	50	Somewhat limited		Very limited	
		Slope	0.50	Slope	1.00
UhF2:					
Uly	70	Somewhat limited		Very limited	
		Slope	0.08	Slope	1.00
Hobbs	30	Not limited		Somewhat limited	
				Flooding	0.60
UkC2:					
Uly Variant	100	Not limited		Not limited	
W:					
Water	100	Not rated		Not rated	
WoB:					
Wood River	100	Not limited		Very limited	
				Sodium content	1.00
Zk:					
Zook	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Flooding	0.60
Zo:					
Zook	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Flooding	0.60

WILDLIFE INTERPRETATIONS
Butler County, Nebraska

Use and Explanation of Wildlife Interpretations

Soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the development of water impoundments. The kind and abundance of wildlife that populate an area depend largely on the amount and distribution of food, cover, water, and living space. If any one of these elements is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area. If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants.

In the Wildlife Interpretations table, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

Suitability Ratings

The potential of the soil is rated good, fair, poor, or very poor.

Good - means that the element of wildlife habitat or the kind of habitat is easily created, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected if the soil is used for the designated purpose.

Fair - means that the element of wildlife habitat or kind of habitat can be created, improved, or maintained in most places. Moderately intensive management is required for satisfactory results.

Poor - means that limitations are severe for the designated element or kind of wildlife habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and requires intensive effort.

Very Poor - means that limitations are very severe for the designated element or kind of wildlife habitat. Habitat is difficult to create, improve, or maintain in most places, and management is difficult and requires intensive effort.

Description of Wildlife Habitat Elements

Openland habitat consists of croplands, pastures, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kind of wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, red fox, and coyote.

Woodland habitat consists of hardwood or conifers, or a mixture of these and associated grasses, legumes and wild herbaceous plants. Examples of wildlife attracted to this habitat are wild turkey, thrushes, woodpeckers, owl, tree squirrels, raccoon, and deer.

Wetland habitat consists of water-tolerant plants in open, marshy or swampy, shallow water areas. Examples of wildlife attracted to this habitat are ducks, geese, herons, bitterns, rails, kingfishers, shorebirds, muskrat, mink, and beaver.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated good are Russian-olive, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are fragrant sumac, chokecherry, American plum, sand plum, and gorden currant.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, saltgrass, cordgrass, rushes, sedges, and cattails.

WILDLIFE INTERPRETATIONS--Continued
Butler County, Nebraska

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, red fox and coyote.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include antelope, deer, cottontail rabbit, prairie chicken, meadowlark, quail, and pheasant.

WILDLIFE INTERPRETATIONS
Butler County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
AED: ARENTS, EARTHEN DAM----------	---	---	---	---	---	---	---	---	---	---	---	---
Af: ALDA----------	Fair	Fair	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair	Good
Ba: BARNEY----------	Very poor	Poor	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
Bd: BLENDON----------	Fair	Fair	Good	Fair	Very poor	---	Very poor	Very poor	Fair	Very poor	Very poor	Good
BdC: BLENDON----------	Fair	Fair	Good	Fair	Very poor	---	Very poor	Very poor	Fair	Very poor	Very poor	Good
Bf: BLENDON----------	Fair	Fair	Good	Fair	Very poor	---	Very poor	Very poor	Fair	Very poor	Very poor	Good
MUIR----------	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
Bh: BOEL----------	Fair	Fair	Good	Good	Good	Good	Fair	Fair	Fair	Good	Poor	Fair
Bn: BOEL----------	Fair	Fair	Good	Good	Good	Good	Fair	Fair	Fair	Good	Poor	Fair
ALDA----------	Fair	Fair	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair	Good
Br: BROCKSBURG------	Good	Good	Good	Fair	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor	Fair
BsD: BURCHARD---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
BsE: BURCHARD---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
BtE2: BURCHARD---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
STEINAUER-------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
Bu: BUTLER----------	Good	Good	Good	---	Good	Good	Fair	Fair	Good	---	Fair	Good
CfG: COLY----------	Very poor	Very poor	Poor	Poor	Poor	Fair	Very poor	Very poor	Poor	Poor	Very poor	Fair
CoB: COZAD----------	Good	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
CrD2: CROFTON---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
CrE2: CROFTON---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
CrF2: CROFTON---------	Poor	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
CrG: CROFTON---------	Poor	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Fm: FILLMORE--------	Fair	Good	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Good	Fair

WILDLIFE INTERPRETATIONS--Continued
Butler County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
Gb: GIBBON----------	Good	Good	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good
GP: PITS----------	Very poor	Very poor	Poor	Poor	Poor	Poor	Very poor	Fair	Very poor	Very poor	Poor	Poor
Gr: GRIGSTON--------	Good	Good	Good	---	---	Fair	Poor	Fair	Good	---	Poor	Fair
Ha: HALL----------	Good	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
Hc: HASTINGS--------	Good	Good	Good	Good	Good	Good	Very poor	Poor	Good	Good	Very poor	Good
HcB: HASTINGS--------	Good	Good	Good	Good	Good	Good	Very poor	Poor	Good	Good	Very poor	Good
HcC: HASTINGS--------	Fair	Good	Good	Good	Fair	Good	Very poor	Poor	Good	Good	Very poor	Good
HcD: HASTINGS--------	Fair	Good	Good	Good	Fair	Good	Very poor	Poor	Good	Good	Very poor	Good
HdC2: HASTINGS--------	Fair	Good	Good	Good	Fair	Good	Very poor	Poor	Good	Good	Very poor	Good
HdD2: HASTINGS--------	Fair	Good	Good	Good	Fair	Good	Very poor	Poor	Good	Good	Very poor	Good
Hg: HOBBS----------	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
HhB: HOBBS----------	Poor	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
HkB: HOLDER----------	Good	Good	Good	Good	Fair	Fair	Very poor	Very poor	Good	Good	Very poor	Good
INT: AQUOLLS---------	---	---	---	---	---	---	---	---	---	---	---	---
IvC: INAVALE---------	Poor	Fair	Good	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
IwC: INAVALE---------	Poor	Fair	Good	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
BOEL----------	Fair	Fair	Good	Good	Good	Good	Fair	Fair	Fair	Good	Poor	Fair
JuC: JUDSON----------	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor	---
Kz: KEZAN----------	Poor	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good	Fair
La: LAMO----------	Good	Good	Good	Good	Good	Good	Fair	Fair	Good	Fair	Fair	Good
LoC2: LONGFORD--------	Fair	Good	Fair	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair
LoD2: LONGFORD--------	Fair	Good	Fair	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair
M-W: MISCELLANEOUS WATER----------	---	---	---	---	---	---	---	---	---	---	---	---

WILDLIFE INTERPRETATIONS--Continued
Butler County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
MnC:												
MONONA----------	Good	Good	Good	Good	Good	---	Very poor	Very poor	Good	Good	Very poor	---
MnD2:												
POHOCCO---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
MnE:												
MONONA----------	Fair	Good	Good	Good	Good	---	Very poor	Very poor	Good	Good	Very poor	---
MnF:												
MONONA----------	Poor	Fair	Good	Fair	Fair	---	Very poor	Very poor	Fair	Fair	Very poor	---
Mu:												
MUIR------------	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
MuB:												
MUIR------------	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
Ob:												
OLBUT-----------	Fair	Good	Good	Good	Good	Good	Fair	Fair	Good	---	Fair	Good
BUTLER----------	Good	Good	Good	---	Good	Good	Fair	Fair	Good	---	Fair	Good
OvB:												
OVINA-----------	Fair	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair	Good
OxC:												
OVINA-----------	Fair	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair	Good
THURMAN---------	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Fair	Fair	Very poor	Fair
PaC2:												
PAWNEE----------	Fair	Fair	Good	---	Fair	Fair	Very poor	Poor	Fair	---	Poor	Fair
PaD2:												
PAWNEE----------	Fair	Fair	Good	---	Fair	Fair	Very poor	Poor	Fair	---	Poor	Fair
PoC2:												
POHOCCO---------	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
PoD2:												
POHOCCO---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
PoE2:												
POHOCCO---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
PsD2:												
POHOCCO---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
CROFTON---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
PsE2:												
POHOCCO---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
CROFTON---------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
PsF2:												
POHOCCO---------	Poor	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
CROFTON---------	Poor	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Sa:												
SALTINE---------	Poor	Poor	Good	Poor	Poor	Poor	Good	Good	Poor	Poor	Good	Poor
GIBBON----------	Good	Good	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good

WILDLIFE INTERPRETATIONS--Continued
Butler County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
Sc:												
SCOTT----------	Poor	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good	Fair
Sh:												
AKSARBEN--------	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor	---
ShC:												
AKSARBEN--------	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor	---
ShC2:												
YUTAN----------	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor	---
ShD:												
AKSARBEN--------	Fair	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor	---
ShD2:												
YUTAN----------	Fair	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor	---
Sk:												
SILVER CREEK----	Poor	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Fair
SmB:												
SIMEON----------	Fair	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
StD2:												
STEINAUER-------	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
StF:												
STEINAUER-------	Poor	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
StG:												
STEINAUER-------	Very poor	Poor	Good	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
ThC:												
THURMAN---------	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Fair	Fair	Very poor	Fair
TkD:												
THURMAN---------	Poor	Fair	Good	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
MONONA VARIANT--	Fair	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	---
UaF2:												
ULY----------	Poor	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Poor	Good	Very poor	Fair
UbF:												
ULY----------	Poor	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Poor	Good	Very poor	Fair
COLY----------	Poor	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
UcF2:												
COLY----------	Poor	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
ULY----------	Poor	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Poor	Good	Very poor	Fair
UhF2:												
ULY----------	Poor	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Poor	Good	Very poor	Fair
HOBBS----------	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	Good
UkC2:												
ULY VARIANT-----	Poor	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
W:												
WATER----------	---	---	---	---	---	---	---	---	---	---	---	---
WoB:												
WOOD RIVER------	Good	Good	Poor	Fair	Good	Poor	Very poor	Very poor	Fair	Good	Very poor	Poor

WILDLIFE INTERPRETATIONS--Continued
Butler County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
Zk:												
ZOOK----------	Good	Fair	Good	Fair	Poor	---	Good	Good	Fair	Fair	Good	---
Zo:												
ZOOK----------	Good	Fair	Good	Fair	Poor	---	Good	Good	Fair	Fair	Good	---

YIELDS PER ACRE OF PASTURE AND HAYLAND
Butler County, Nebraska

Use and Explanation of Pastureland and Hayland Interpretations

This subsection provides information concerning the suitability of soils for the production of pasture and hayland. This subsection may contain pasture and hayland suitability groupings, land capability and yield estimates, yield estimates for individual grasses or legumes, or other information pertaining to the production of forage.

Pasture and Hayland Suitability Groupings

Soils are placed in pasture and hayland groups according to their suitability for the production of forage. The soils in each group are enough alike to be suited to the same grasses or legumes, to have similar limitations and hazards, to require similar management, and to have similar productivity and other responses to management. Thus, the pasture and hayland suitability group is a convenient way of grouping the soils for their management. If used, these groupings are identified and described in other reports in the subsection.

Yield Estimates

The average yields per acre that can be expected of the principal pasture or hayland crops, under a high level of management, are presented in this subsection. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall or other climatic factors. The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation are also important management practices.

The Pasture and Hayland table show yield estimates in tons per acre and animal unit months for pasture and hayland groups. An animal unit month is the amount of forage required by one animal unit (AU) for 30 days. On animal unit (AU) is one (1000 pound) mature cow and a calf up to weaning age (usually six months of age) or their equivalent. The Natural Resources Conservation Service uses 900 pounds of air dry forage as the amount needed to meet this requirement. To maintain a healthy and vigorous plant community, the degree of use should never be greater than 50 percent. Therefore only 25 percent of the total biomass grown is considered consumed by the grazing animal. Animal Unit Months can be converted to air dry pounds per acre production by multiplying the AUM by 30 days, then by 30 pounds per day, and then by four. This figure is the amount of total forage production.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil in the Nontechnical Description section. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

YIELDS PER ACRE OF PASTURE AND HAYLAND--Continued
Butler County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil) Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
AED: Arents, Earthen Dam	8	---	---	---
Af: Alda	3w	3w	2.80	5.00
Ba: Barney	5w	---	---	---
Bd: Blendon	2s	2e	2.80	5.80
BdC: Blendon	3e	3e	2.80	5.80
Bf: Blendon	2s	2e	3.00	6.00
Muir	1	1	3.00	6.00
Bh: Boel	3w	3w	2.70	4.50
Bn: Boel	3w	3w	2.80	4.80
Alda	3w	3w	2.80	4.80
Br: Brocksburg	2e	2e	1.80	5.30
BsD: Burchard	3e	4e	2.80	5.00
BsE: Burchard	4e	---	2.50	---
BtE2: Burchard	4e	---	2.20	---
Steinauer	4e	---	2.20	---
Bu: Butler	2w	2w	3.80	6.00
CfG: Coly	7e	---	---	---
CoB: Cozad	2e	2e	3.50	6.00
CrD2: Crofton	4e	4e	2.30	4.50
CrE2: Crofton	4e	---	2.00	---
CrF2: Crofton	6e	---	---	---
CrG: Crofton	7e	---	---	---
Fm: Fillmore	3w	4w	2.80	4.50
Gb: Gibbon	2w	2w	4.50	6.00
GP: Pits	8s	---	---	---
Gr: Grigston	1	1	4.20	6.50
Ha: Hall	1	1	3.90	6.50
Hc: Hastings	1	1	3.80	6.50

YIELDS PER ACRE OF PASTURE AND HAYLAND--Continued
Butler County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil) Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
HcB: Hastings	2e	2e	3.60	6.20
HcC: Hastings	3e	3e	3.40	6.00
HcD: Hastings	4e	4e	3.00	5.50
HdC2: Hastings	3e	3e	3.20	5.80
HdD2: Hastings	4e	4e	2.80	5.00
Hg: Hobbs	2w	2w	4.50	6.50
HhB: Hobbs	6w	---	---	---
HkB: Holder	2e	2e	3.80	6.20
INT: Aquolls	5w	---	---	---
IvC: Inavale	6e	4e	---	3.80
IwC: Inavale	6e	4e	---	3.50
Boel	3w	3w	---	3.50
JuC: Judson	2e	3e	4.00	6.20
Kz: Kezan	4w	---	3.00	---
La: Lamo	2w	2w	3.80	5.80
LoC2: Longford	3e	3e	2.60	---
LoD2: Longford	4e	4e	2.00	---
M-W: Miscellaneous Water	---	---	---	---
MnC: Monona	2e	3e	3.80	6.00
MnD2: Pohocco	3e	4e	3.40	5.50
MnE: Monona	4e	---	3.00	---
MnF: Monona	6e	---	---	---
Mu: Muir	1	1	4.50	6.50
MuB: Muir	2e	2e	4.00	6.20
Ob: Olbut	3s	3s	2.80	4.50
Butler	2w	2w	2.80	4.50
OvB: Ovina	3w	3w	3.20	5.00

YIELDS PER ACRE OF PASTURE AND HAYLAND--Continued
Butler County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil) Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
OxC:				
Ovina	3w	3w	2.50	4.80
Thurman	3e	3e	2.50	4.80
PaC2:				
Pawnee	3e	4e	2.40	4.50
PaD2:				
Pawnee	4e	---	2.00	4.00
PoC2:				
Pohocco	2e	3e	3.80	6.00
PoD2:				
Pohocco	3e	4e	3.20	5.50
PoE2:				
Pohocco	4e	---	3.00	---
PsD2:				
Pohocco	3e	4e	2.90	5.00
Crofton	4e	4e	2.90	5.00
PsE2:				
Pohocco	4e	---	2.40	---
Crofton	4e	---	2.40	---
PsF2:				
Pohocco	6e	---	---	---
Crofton	6e	---	---	---
Sa:				
Saltine	6s	---	3.20	4.50
Gibbon	2w	2w	3.20	4.50
Sc:				
Scott	4w	---	---	---
Sh:				
Aksarben	1	1	4.20	6.50
ShC:				
Aksarben	2e	3e	4.00	6.00
ShC2:				
Yutan	2e	3e	3.80	5.80
ShD:				
Aksarben	3e	4e	3.50	5.70
ShD2:				
Yutan	3e	4e	3.30	5.50
Sk:				
Silver Creek	4s	4s	1.70	3.50
SmB:				
Simeon	4e	4e	1.40	4.00
StD2:				
Steinauer	4e	---	2.20	---
StF:				
Steinauer	6e	---	---	---
StG:				
Steinauer	7e	---	---	---
ThC:				
Thurman	4e	4e	1.80	4.00
TkD:				
Thurman	6e	4e	2.00	4.40
Monona Variant	4e	4e	2.00	4.40

YIELDS PER ACRE OF PASTURE AND HAYLAND--Continued
Butler County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil) Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
UaF2:				
Uly	6e	---	---	---
UbF:				
Uly	6e	---	---	---
Coly	6e	---	---	---
UcF2:				
Coly	6e	---	---	---
Uly	6e	---	---	---
UhF2:				
Uly	6e	---	---	---
Hobbs	2w	2w	---	---
UkC2:				
Uly Variant	4s	4s	2.50	4.80
W:				
Water	---	---	---	---
WoB:				
Wood River	4s	3s	2.80	5.20
Zk:				
Zook	2w	---	4.40	6.00
Zo:				
Zook	2w	---	3.80	6.00

CONSERVATION TREE AND SHRUB MANAGEMENT
Butler County, Nebraska

A Conservation Tree/Shrub Suitability Group (CTSG), formerly Windbreak Suitability Group, is a physiographic unit or area having similar climatic and edaphic characteristics that control the selection and height growth of trees and shrubs.

In this table, the Conservation Tree and Shrub Grouping is expressed as a group index number. The group index for Conservation Tree and Shrub groups (CTSG) are a guide for species best suited for different kinds of soil and for prediction height, growth, and effectiveness. The groupings can be used when selection woody plants for windbreaks, wildlife plantings riparian buffers, reforestation, other environmental plantings, recreation, landscaping, wetland restoration or enhancement and critical area plantings. CTSG's are developed to assure satisfactory species selection and adaptation to specific conditions of soil, climate and physiography. CTSG's are a guide for selection species best suited for different kinds of soil and prediction height growth and effectiveness.

All soil series mapped in the state have been placed in 10 groups of similar soil characteristics. Groups 1, 2, 3, 4, 6, and 9 are further divided into subgroups. In addition, all groups provide information by Major Land Resource Areas.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters a tree or shrub may be well or poorly suited because of soil characteristics. Each tree or shrub also has definable potentials of height growth depending on the factors just mentioned. Accurate definitions of potential heights are necessary for proper windbreak planning and design.

Windbreaks protect livestock, buildings, roads and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low-growing and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not grow trees originally. Knowledge of how trees perform on such land can be gained only by observing and recording their performance where trees have been planted and survived. The problem is compounded by the fact that many favorite windbreak species are not indigenous to the areas in which they are planted.

The Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups shows the adapted species listing for each group index number. Showing the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates are based on measurements and observation of established plantings that have been given adequate care. This information should be used to determine the placement of a windbreak, the area protected and the arrangement of species.

A number of attributes are included in the CTSG species tables for each group number found in this section of the Field Office Technical Guide. These attributes were rated subjectively and assigned a relative value to further assist those unfamiliar with individual species characteristics or desirability for the intended use. Definitions and explanations can be found. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery. See part 537 of the National Forestry Manual for additional information.

In the Tree and Shrub Management table interpretive ratings are given for various aspects of forest and conservation tree and shrub management. Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. Well suited indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. Moderately well suited indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable and fair performance can be expected. Some maintenance is needed. Poorly suited indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. Unsuited indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

The paragraphs that follow indicate the soil properties considered in rating the soils for forest and conservation tree and shrub management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet. Also, in the Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups.

Ratings in the columns suitability for hand planting and suitability for mechanical planting are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately well suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column suitability for mechanical site preparation (surface) are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1-foot is considered in the ratings.

Ratings in the column suitability for mechanical site preparation (deep) are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column potential for seedling mortality are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality. See the National Forestry Manual, Subpart B for criteria used in rating management concerns. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

CONSERVATION TREE AND SHRUB MANAGEMENT
Butler County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
AED:						
Arents, Earthen Dam-		Not rated	Not rated	Not rated	Not rated	Not rated
Af:						
Alda----------		Well suited	Well suited	Well suited	Well suited	Low
Ba:						
Barney----------		Well suited	Well suited	Well suited	Well suited	High Wetness
Bd:						
Blendon----------		Well suited	Well suited	Well suited	Well suited	Low
BdC:						
Blendon----------		Well suited	Well suited	Well suited	Well suited	Low
Bf:						
Blendon----------		Well suited	Well suited	Well suited	Well suited	Low
Muir----------		Well suited	Well suited	Well suited	Well suited	Low
Bh:						
Boel----------		Well suited	Well suited	Well suited	Well suited	Low
Bn:						
Boel----------		Well suited	Well suited	Well suited	Well suited	Low
Alda----------		Well suited	Well suited	Well suited	Well suited	Low
Br:						
Brocksburg----------		Well suited	Well suited	Well suited	Well suited	Low
BsD:						
Burchard----------		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
BsE:						
Burchard----------		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
BtE2:						
Burchard----------		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
Steinauer----------		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Moderate Soil reaction
Bu:						
Butler----------		Well suited	Well suited	Well suited	Well suited	High Wetness
CfG:						
Coly----------		Moderately suited Slope	Unsuited Slope	Unsuited Slope	Unsuited Slope	Moderate Soil reaction
CoB:						
Cozad----------		Well suited	Well suited	Well suited	Well suited	Low
CrD2:						
Crofton----------		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
CrE2:						
Crofton----------		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
CrF2:						
Crofton----------		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
CrG:						
Crofton----------		Moderately suited Slope	Unsuited Slope	Unsuited Slope	Unsuited Slope	Moderate Soil reaction
Fm:						
Fillmore----------		Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	High Wetness
Gb:						
Gibbon----------		Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Moderate Soil reaction
GP:						
Pits----------		Not rated	Not rated	Not rated	Not rated	Not rated
Gr:						
Grigston----------		Well suited	Well suited	Well suited	Well suited	Low
Ha:						
Hall----------		Well suited	Well suited	Well suited	Well suited	Low

CONSERVATION TREE AND SHRUB MANAGEMENT
Butler County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Hc:						
Hastings----------		Moderately suited Stickiness	Moderately suited Stickiness	Poorly suited Stickiness	Well suited	Low
HcB:						
Hastings----------		Moderately suited Stickiness	Moderately suited Stickiness	Poorly suited Stickiness	Well suited	Low
HcC:						
Hastings----------		Moderately suited Stickiness	Moderately suited Stickiness Slope	Poorly suited Stickiness	Well suited	Low
HcD:						
Hastings----------		Moderately suited Stickiness	Moderately suited Stickiness Slope	Poorly suited Stickiness	Well suited	Low
HdC2:						
Hastings----------		Moderately suited Stickiness	Moderately suited Stickiness Slope	Poorly suited Stickiness	Well suited	Low
HdD2:						
Hastings----------		Moderately suited Stickiness	Moderately suited Stickiness Slope	Poorly suited Stickiness	Well suited	Low
Hg:						
Hobbs----------		Well suited	Well suited	Well suited	Well suited	Low
HhB:						
Hobbs----------		Well suited	Well suited	Well suited	Well suited	Low
HkB:						
Holder----------		Well suited	Well suited	Well suited	Well suited	Low
INT:						
Aquolls----------		Well suited	Well suited	Well suited	Well suited	High Wetness Soil reaction
IvC:						
Inavale----------		Well suited	Moderately suited Slope	Well suited	Well suited	Low
IwC:						
Inavale----------		Well suited	Moderately suited Slope	Well suited	Well suited	Low
Boel----------		Well suited	Well suited	Well suited	Well suited	Low
JuC:						
Judson----------		Well suited	Well suited	Well suited	Well suited	Low
Kz:						
Kezan----------		Well suited	Well suited	Well suited	Well suited	Low
La:						
Lamo----------		Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
LoC2:						
Longford----------		Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
LoD2:						
Longford----------		Poorly suited Stickiness	Poorly suited Stickiness Slope	Poorly suited Stickiness	Well suited	Low
M-W:						
Miscellaneous Water-		Not rated	Not rated	Not rated	Not rated	Not rated
MnC:						
Monona----------		Well suited	Well suited	Well suited	Well suited	Low
MnD2:						
Pohocco----------		Well suited	Moderately suited Slope	Well suited	Well suited	Low
MnE:						
Monona----------		Well suited	Moderately suited Slope	Well suited	Well suited	Low
MnF:						
Monona----------		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
Mu:						
Muir----------		Well suited	Well suited	Well suited	Well suited	Low

CONSERVATION TREE AND SHRUB MANAGEMENT
Butler County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
MuB:						
Muir		Well suited	Well suited	Well suited	Well suited	Low
Ob:						
Olbut		Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	High Wetness Salinity
Butler		Well suited	Well suited	Well suited	Well suited	High Wetness
OvB:						
Ovina		Well suited	Well suited	Well suited	Well suited	Low
OxC:						
Ovina		Well suited	Well suited	Well suited	Well suited	Low
Thurman		Well suited	Well suited	Well suited	Well suited	Low
PaC2:						
Pawnee		Poorly suited Stickiness	Poorly suited Stickiness Slope	Poorly suited Stickiness	Well suited	Low
PaD2:						
Pawnee		Poorly suited Stickiness	Poorly suited Stickiness Slope	Poorly suited Stickiness	Well suited	Low
PoC2:						
Pohocco		Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
PoD2:						
Pohocco		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
PoE2:						
Pohocco		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
PsD2:						
Pohocco		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
Crofton		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
PsE2:						
Pohocco		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
Crofton		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
PsF2:						
Pohocco		Moderately suited Stickiness	Poorly suited Slope Stickiness	Poorly suited Slope	Poorly suited Slope	Low
Crofton		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
Sa:						
Saltine		Well suited	Well suited	Well suited	Well suited	High Soil reaction Salinity
Gibbon		Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
Sc:						
Scott		Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	High Wetness
Sh:						
Aksarben		Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
ShC:						
Aksarben		Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
ShC2:						
Yutan		Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low

CONSERVATION TREE AND SHRUB MANAGEMENT
Butler County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Windbreak Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
ShD:						
Aksarben		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
ShD2:						
Yutan		Moderately suited Stickiness	Moderately suited Stickiness Slope	Well suited	Well suited	Low
Sk:						
Silver Creek		Well suited	Well suited	Well suited	Well suited	Low
SmB:						
Simeon		Well suited	Well suited	Well suited	Well suited	Low
StD2:						
Steinauer		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Moderate Soil reaction
StF:						
Steinauer		Moderately suited Stickiness	Poorly suited Slope Stickiness	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
StG:						
Steinauer		Moderately suited Slope Stickiness	Unsuited Slope Stickiness	Unsuited Slope	Unsuited Slope	Moderate Soil reaction
ThC:						
Thurman		Well suited	Moderately suited Slope	Well suited	Well suited	Low
TkD:						
Thurman		Well suited	Moderately suited Slope	Well suited	Well suited	Low
Monona Variant		Well suited	Moderately suited Slope	Well suited	Well suited	Low
UaF2:						
Uly		Well suited	Moderately suited Slope	Well suited	Well suited	Low
UbF:						
Uly		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
Coly		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
UcF2:						
Coly		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
Uly		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
UhF2:						
Uly		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
Hobbs		Well suited	Well suited	Well suited	Well suited	Low
UkC2:						
Uly Variant		Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Moderate Salinity
W:						
Water		Not rated	Not rated	Not rated	Not rated	Not rated
WoB:						
Wood River		Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Moderate Salinity
Zk:						
Zook		Well suited	Well suited	Well suited	Well suited	High Wetness
Zo:						
Zook		Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	High Wetness

ENGINEERING INDEX PROPERTIES
Butler County, Nebraska

Engineering Index Properties table gives the engineering classifications and the range of index properties for the layers of each soil in the survey area. Depth to the upper and lower boundaries of each layer is indicated. Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. Loam, for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, gravelly. Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998). The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection. If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in Engineering Index Properties table.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

ENGINEERING INDEX PROPERTIES--Continued
Butler County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
AED:												
Arents, Earthen Dam----------	---	---	---	---	---	---	---	---	---	---	---	---
Af:												
Alda----------	0-14	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	70-100	30-50	15-20	NP-5
	14-26	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	95-100	95-100	70-100	30-50	15-26	NP-7
	26-60	Coarse sand	SC-SM, SM, SP, SP-SM	A-1, A-2, A-3	0	0	70-100	65-95	30-95	2-15	15-20	NP-5
Ba:												
Barney---------	0-7	Loam	ML, CL, CL-ML	A-4, A-6	0	0	90-100	90-100	85-95	60-95	20-35	3-15
	7-14		ML, SM	A-2, A-4	0	0	90-100	90-100	55-80	20-60	10-20	NP-5
	14-60	Fine sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0	90-100	85-100	30-70	3-15	0-10	NP-5
Bd:												
Blendon--------	0-15	Fine sandy loam	SM	A-4	0	0	100	90-100	60-100	35-50	20-30	NP-5
	15-44	Fine sandy loam	CL, ML, SC, SM	A-2, A-4	0	0	100	85-100	60-100	20-65	20-30	NP-10
	44-60		SC-SM, SM, SP, SP-SM	A-2, A-3	0	0	100	95-100	60-80	0-20	15-20	NP-5
BdC:												
Blendon--------	0-15	Fine sandy loam	SM	A-4	0	0	100	90-100	60-100	35-50	20-30	NP-5
	15-44	Fine sandy loam	CL, ML, SC, SM	A-2, A-4	0	0	100	85-100	60-100	20-65	20-30	NP-10
	44-60		SC-SM, SM, SP, SP-SM	A-2, A-3	0	0	100	95-100	60-80	0-20	15-20	NP-5
Bf:												
Blendon--------	0-15	Fine sandy loam	SM	A-4	0	0	100	90-100	60-100	35-50	20-30	NP-5
	15-44	Fine sandy loam	CL, ML, SC, SM	A-2, A-4	0	0	100	85-100	60-100	20-65	20-30	NP-10
	44-60		SC-SM, SM, SP, SP-SM	A-2, A-3	0	0	100	95-100	60-80	0-20	15-20	NP-5
Muir----------	0-20	Silt loam	CL	A-6	0	0	100	100	90-100	70-90	30-35	10-15
	20-36	Silt loam	CL	A-6, A-7-6	0	0	100	100	85-100	65-90	30-45	10-20
	36-60	Silt loam	CL	A-6, A-7-6	0	0	100	100	85-100	65-90	30-45	10-20
Bh:												
Boel----------	0-14	Loam	ML	A-4	0	0	100	100	85-100	70-95	24-37	2-10
	14-60		SC-SM, SM, SP	A-2, A-3	0	0	100	95-100	85-95	0-25	10-20	NP-5
Bn:												
Boel----------	0-17	Loam	ML	A-4	0	0	100	100	85-100	70-95	24-37	2-10
	17-60		SC-SM, SM, SP	A-2, A-3	0	0	100	95-100	85-95	0-25	10-20	NP-5
Alda----------	0-14	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	70-100	30-50	15-20	NP-5
	14-26	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	95-100	95-100	70-100	30-50	15-26	NP-7
	26-60	Coarse sand	SC-SM, SM, SP, SP-SM	A-2, A-3, A-1	0	0	70-100	65-95	30-95	2-15	15-20	NP-5
Br:												
Brocksburg-----	0-12	Fine sandy loam	SC-SM, SM	A-4	0	0	100	100	70-85	35-50	15-20	NP-5
	12-28	Loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	11-20
	28-40		SM, SP, SP-SM	A-1, A-2, A-3	0	0	85-95	50-90	20-60	3-15	---	NP
BsD:												
Burchard-------	0-12	Loam	CL	A-6	0	0-5	95-100	95-100	80-100	55-95	25-40	11-22
	12-32	Clay loam	CL	A-6, A-7	0	0-5	95-100	85-100	75-95	60-80	35-50	20-30
	32-60		CL	A-6, A-7	0	0-5	95-100	85-100	75-95	60-80	35-50	20-30
BsE:												
Burchard-------	0-12	Loam	CL	A-6	0	0-5	95-100	95-100	80-100	55-95	25-40	11-22
	12-32	Clay loam	CL	A-6, A-7	0	0-5	95-100	85-100	75-95	60-80	35-50	20-30
	32-60	Clay loam	CL	A-6, A-7	0	0-5	95-100	85-100	75-95	60-80	35-50	20-30
BtE2:												
Burchard-------	0-7	Clay loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	60-80	35-50	14-24
	7-25	Clay loam	CL	A-6, A-7	0	0-5	95-100	85-100	75-95	60-80	35-50	20-30
	25-60	Clay loam	CL	A-6, A-7	0	0-5	95-100	85-100	75-95	60-80	35-50	20-30
Steinauer------	0-9	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	85-100	55-90	30-50	15-25
	9-18	Clay loam	CH, CL	A-6, A-7	0	0-5	90-100	90-100	90-100	70-90	30-55	12-30
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	90-100	90-100	90-100	60-75	25-55	10-30
Bu:												
Butler---------	0-14	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	20-35	5-15
	14-35	Silty clay	CH	A-7	0	0	100	100	100	95-100	50-70	30-45
	35-40	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	35-60	15-35
	40-60	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	10-25
CfG:												
Coly----------	0-4	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	85-100	85-100	20-45	2-20
	4-60	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	85-100	20-40	2-15
CoB:												
Cozad----------	0-12	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	100	75-100	20-35	2-12
	12-29	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	95-100	90-100	80-95	20-35	2-12
	29-60	Very fine sandy loam	CL-ML, ML, CL	A-4, A-6	0	0	95-100	95-100	80-100	50-100	20-35	2-12
CrD2:												
Crofton--------	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	6-60	Silt loam	CL	A-6, A-7	0	0	100	95-100	95-100	95-100	30-50	5-25
CrE2:												
Crofton--------	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	6-60	Silt loam	CL	A-6, A-7	0	0	100	95-100	95-100	95-100	30-50	5-25
CrF2:												
Crofton--------	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	6-60	Silt loam	CL	A-6, A-7	0	0	100	95-100	95-100	95-100	30-50	5-25
CrG:												
Crofton--------	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	6-60	Silt loam	CL	A-6, A-7	0	0	100	95-100	95-100	95-100	30-50	5-25

ENGINEERING INDEX PROPERTIES--Continued
Butler County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Fm:												
Fillmore	0-12	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	95-100	20-40	2-20
	12-34	Silty clay	CH	A-7	0	0	100	100	100	95-100	50-75	30-45
	34-60	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	25-75	10-45
Gb:												
Gibbon	0-14	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	95-100	85-100	35-55	20-35
	14-36		CL	A-6	0	0	100	100	90-100	80-90	25-38	12-20
	36-60		CL, ML, SC, SM	A-4	0	0	100	100	70-95	35-90	15-25	NP-8
GP:												
Pits	0-60	Gravelly sand	GP-GM, SM, SP, SP-SM	A-1, A-2, A-3	---	0-5	45-100	40-100	0-80	0-40	0-14	NP
Gr:												
Grigston	0-19	Silt loam	CL	A-6	0	0	100	100	95-100	80-100	30-35	10-15
	19-36	Silt loam	CL	A-6	0	0	100	100	95-100	85-100	30-40	10-20
	36-60	Silt loam	CL	A-6	0	0	100	100	85-100	70-100	30-40	10-20
Ha:												
Hall	0-18	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	95-100	25-40	3-18
	18-39	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-50	15-30
	39-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-40	5-20
Hc:												
Hastings	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	25-40	5-15
	10-40	Silty clay loam	CH, CL	A-7	0	0	100	100	100	95-100	40-65	20-40
	40-60	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-50	10-25
HcB:												
Hastings	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	25-40	5-15
	10-40	Silty clay loam	CH, CL	A-7	0	0	100	100	100	95-100	40-65	20-40
	40-60	Silt loam	CL	A-7, A-6	0	0	100	100	100	95-100	30-50	10-25
HcC:												
Hastings	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	25-40	5-15
	10-40	Silty clay loam	CH, CL	A-7	0	0	100	100	100	95-100	40-65	20-40
	40-60	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-50	10-25
HcD:												
Hastings	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	25-40	5-15
	10-40	Silty clay loam	CH, CL	A-7	0	0	100	100	100	95-100	40-65	20-40
	40-60	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-50	10-25
HdC2:												
Hastings	0-6	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	10-25
	6-27	Silty clay loam	CH, CL	A-7	0	0	100	100	100	95-100	40-65	20-40
	27-60	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-50	10-25
HdD2:												
Hastings	0-6	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	10-25
	6-27	Silty clay loam	CH, CL	A-7	0	0	100	100	100	95-100	40-65	20-40
	27-60	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-50	10-25
Hg:												
Hobbs	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-20
	7-25	Stratified silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-20
	25-60	Silt loam	CL, CL-ML, MH	A-4, A-6, A-7	0	0	100	100	95-100	80-100	25-55	5-25
HhB:												
Hobbs	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-20
	7-25	Stratified silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-20
	25-60	Silt loam	CL, CL-ML, MH	A-4, A-6, A-7	0	0	100	100	95-100	80-100	25-55	5-25
HkB:												
Holder	0-13	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	98-100	90-100	20-40	2-16
	13-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	98-100	95-100	35-50	20-35
	42-60	Silt loam	CL, ML	A-4, A-6, A-7	0	0	100	100	95-100	90-100	30-45	5-20
INT:												
Aquolls	0-72	Variable			---	---	---	---	---	---	---	---
IvC:												
Inavale	0-8	Loamy sand	SC-SM, SM, SP-SM	A-2, A-3	0	0	100	100	85-95	5-35	15-25	NP-5
	8-21	Fine sand	SC-SM, SM, SP-SM	A-2, A-3	0	0	100	90-100	65-85	5-30	15-25	NP-5
	21-60	Fine sand	SM, SP-SM, SC-SM	A-2, A-3	0	0	100	100	70-90	5-30	15-25	NP-5
IwC:												
Inavale	0-8	Loamy sand	SC-SM, SM, SP-SM	A-2, A-3	0	0	100	100	85-95	5-35	15-25	NP-5
	8-21	Fine sand	SC-SM, SM, SP-SM	A-2, A-3	0	0	100	90-100	65-85	5-30	15-25	NP-5
	21-60	Fine sand	SC-SM, SM, SP-SM	A-2, A-3	0	0	100	100	70-90	5-30	15-25	NP-5
Boel	0-14	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	100	100	85-95	20-40	15-20	NP-5
	14-60		SC-SM, SM, SP	A-2, A-3	0	0	100	95-100	85-95	0-25	10-20	NP-5
JuC:												
Judson	0-20	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	25-35	5-15
	20-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-50	15-25
	42-60	Silty clay loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	100	95-100	25-50	5-25
Kz:												
Kezan	0-6	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	70-90	20-35	2-12
	6-13	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	80-95	20-40	4-20
	13-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	80-95	20-40	4-20
La:												
Lamo	0-12	Silty clay loam	CH, CL	A-4, A-6, A-7	0	0	100	100	95-100	80-95	25-55	8-25
	12-60	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	95-100	85-95	30-55	11-25

ENGINEERING INDEX PROPERTIES--Continued
Butler County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
LoC2:												
Longford-------	0-7	Silty clay loam	CL	A-7	0	0	100	95-100	90-100	85-95	45-50	25-30
	7-48	Silty clay	CH	A-7-6	0	0	100	95-100	90-100	75-95	50-60	30-40
	48-60	Silty clay loam	CL	A-6, A-7-6	0	0	100	95-100	85-100	70-95	35-50	15-30
LoD2:												
Longford-------	0-7	Silty clay loam	CL	A-7	0	0	100	95-100	90-100	85-95	45-50	25-30
	7-48	Silty clay	CH	A-7-6	0	0	100	95-100	90-100	75-95	50-60	30-40
	48-60	Silty clay loam	CL	A-6, A-7-6	0	0	100	95-100	85-100	70-95	35-50	15-30
M-W:												
Miscellaneous Water---------	---	---	---	---	---	---	---	---	---	---	---	---
MnC:												
Monona---------	0-13	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	13-42	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	42-60	Silt loam	CL	A-6	0	0	100	100	95-100	95-100	30-40	10-20
MnD2:												
Pohocco--------	0-13	Silt loam	ML	A-7, A-4, A-6	0	0	100	100	100	95-100	30-45	5-15
	13-42		CL, ML	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25
	42-60		ML	A-4, A-6, A-7	0	0	100	100	100	95-100	30-45	5-15
MnE:												
Monona---------	0-13	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	13-42	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	42-60	Silt loam	CL	A-6	0	0	100	100	95-100	95-100	30-40	10-20
MnF:												
Monona---------	0-13	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	13-42	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	42-60	Silt loam	CL	A-6	0	0	100	100	95-100	95-100	30-40	10-20
Mu:												
Muir-----------	0-20	Silt loam	CL	A-6	0	0	100	100	90-100	70-90	30-35	10-15
	20-36	Silt loam	CL	A-6, A-7-6	0	0	100	100	85-100	65-90	30-45	10-20
	36-60	Silt loam	CL	A-6, A-7-6	0	0	100	100	85-100	65-90	30-45	10-20
MuB:												
Muir-----------	0-20	Silt loam	CL	A-6	0	0	100	100	90-100	70-90	30-35	10-15
	20-36	Silt loam	CL	A-6, A-7-6	0	0	100	100	85-100	65-90	30-45	10-20
	36-60	Silt loam	CL	A-6, A-7-6	0	0	100	100	85-100	65-90	30-45	10-20
Ob:												
Olbut----------	0-6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	20-40	5-15
	6-20	Silty clay	CH	A-7	0	0	100	100	100	95-100	50-65	30-45
	20-29	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	30-60	10-35
	29-80	Silt loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	30-60	10-35
Butler---------	0-14	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	20-35	5-15
	14-35	Silty clay	CH	A-7	0	0	100	100	100	95-100	50-70	30-45
	35-40	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	35-60	15-35
	40-60	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	10-25
OvB:												
Ovina----------	0-16	Loamy fine sand	SM	A-2	0	0	100	100	70-90	15-30	10-20	NP-5
	16-21	Fine sandy loam	ML, SM	A-4	0	0	100	100	70-85	40-60	15-30	NP-10
	21-60	Fine sandy loam	ML, SM	A-4	0	0	100	100	70-85	40-60	15-30	NP-10
OxC:												
Ovina----------	0-16	Loamy fine sand	SM	A-2	0	0	100	100	70-90	15-30	10-20	NP-5
	16-21	Fine sandy loam	ML, SM	A-4	0	0	100	100	70-85	40-60	15-30	NP-10
	21-60	Fine sandy loam	ML, SM	A-4	0	0	100	100	70-85	40-60	15-30	NP-10
Thurman--------	0-10	Loamy fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	90-100	5-40	15-20	NP-5
	10-16	Loamy fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	90-100	5-40	15-20	NP-5
	16-60	Fine sand	SP-SM, SM	A-2, A-3	0	0	100	100	50-95	5-35	15-20	NP-5
PaC2:												
Pawnee---------	0-9	Clay loam	CL	A-6	0	0	95-100	95-100	85-100	70-90	30-40	10-20
	9-38	Clay	CH	A-7	0	0	95-100	95-100	85-100	70-85	50-70	25-45
	38-60	Clay loam	CH, CL	A-6, A-7	0	0	95-100	95-100	80-100	70-90	35-55	20-40
PaD2:												
Pawnee---------	0-9	Clay loam	CL	A-6	0	0	95-100	95-100	85-100	70-90	30-40	10-20
	9-38	Clay	CH	A-7	0	0	95-100	95-100	85-100	70-85	50-70	25-45
	38-60	Clay loam	CH, CL	A-6, A-7	0	0	95-100	95-100	80-100	70-90	35-55	20-40
PoC2:												
Pohocco--------	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-50	15-25
	7-27		CL, ML	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25
	27-60		ML	A-4, A-6, A-7	0	0	100	100	100	95-100	30-45	5-15
PoD2:												
Pohocco--------	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-50	15-25
	7-27		CL, ML	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25
	27-60		ML	A-4, A-6, A-7	0	0	100	100	100	95-100	30-45	5-15
PoE2:												
Pohocco--------	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-50	15-25
	7-27		CL, ML	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25
	27-60		ML	A-4, A-6, A-7	0	0	100	100	100	95-100	30-45	5-15
PsD2:												
Pohocco--------	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-50	15-25
	7-27		CL, ML	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25
	27-60		ML	A-6, A-7, A-4	0	0	100	100	100	95-100	30-45	5-15
Crofton--------	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	6-60	Silt loam	CL	A-6, A-7	0	0	100	95-100	95-100	95-100	30-50	5-25
PsE2:												
Pohocco--------	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-50	15-25
	7-27		CL, ML	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25
	27-60		ML	A-4, A-6, A-7	0	0	100	100	100	95-100	30-45	5-15
Crofton--------	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	6-60	Silt loam	CL	A-6, A-7	0	0	100	95-100	95-100	95-100	30-50	5-25

ENGINEERING INDEX PROPERTIES--Continued
Butler County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
PsF2:												
Pohocco--------	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-50	15-25
	7-27		CL, ML	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25
	27-60		ML	A-4, A-6, A-7	0	0	100	100	100	95-100	30-45	5-15
Crofton--------	0-6	Silt loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-50	10-25
	6-60	Silt loam	CL	A-6, A-7	0	0	100	95-100	95-100	95-100	30-50	5-25
Sa:												
Saltine--------	0-9	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	95-100	85-100	60-90	20-35	3-15
	9-25	Silty clay loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	95-100	95-100	85-100	60-100	25-55	5-25
	25-60	Silty clay loam	CL	A-4, A-6, A-7	0	0	100	100	95-100	70-95	25-50	7-25
Gibbon---------	0-14	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	70-90	20-30	2-10
	14-36		CL	A-6	0	0	100	100	90-100	80-90	25-38	12-20
	36-60		CL, ML, SC, SM	A-4	0	0	100	100	70-95	35-90	15-25	NP-8
Sc:												
Scott----------	0-10	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	100	95-100	20-45	2-20
	10-36	Silty clay	CH, CL	A-7	0	0	100	100	100	95-100	41-75	20-45
	36-49	Silty clay loam	CH, CL	A-6, A-7	0	0	100	100	100	95-100	35-60	20-40
	49-60	Silt loam	CL	A-4, A-6, A-7	0	0	100	100	90-100	90-100	25-50	8-24
Sh:												
Aksarben-------	0-12	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-100	40-50	15-25
	12-46		CH, CL	A-7	0	0	100	100	95-100	90-100	47-55	22-27
	46-60		CL	A-6, A-7	0	0	100	100	95-100	85-95	35-47	14-22
ShC:												
Aksarben-------	0-12	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-100	40-50	15-25
	12-46		CH, CL	A-7	0	0	100	100	95-100	90-100	47-55	22-27
	46-60		CL	A-6, A-7	0	0	100	100	95-100	85-95	35-47	14-22
ShC2:												
Yutan----------	0-7	Silty clay loam	CH, CL	A-7	0	0	100	100	95-100	90-100	40-58	20-35
	7-36		CH, CL	A-7	0	0	100	100	95-100	90-100	40-58	20-35
	36-60		CL	A-6, A-7	0	0	100	100	95-100	90-100	34-44	14-24
ShD:												
Aksarben-------	0-12	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-100	40-50	15-25
	12-46		CH, CL	A-7	0	0	100	100	95-100	90-100	47-55	22-27
	46-60		CL	A-6, A-7	0	0	100	100	95-100	85-95	35-47	14-22
ShD2:												
Yutan----------	0-7	Silty clay loam	CH, CL	A-7	0	0	100	100	95-100	90-100	40-58	20-35
	7-28		CH, CL	A-7	0	0	100	100	95-100	90-100	40-58	20-35
	28-60		CL	A-6, A-7	0	0	100	100	95-100	90-100	34-44	14-24
Sk:												
Silver Creek---	0-15	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	25-40	7-15
	15-23	Silty clay	CH, CL	A-7	0	0	100	100	95-100	95-100	40-60	25-35
	23-50	Sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	100	70-85	40-55	22-40	4-15
	50-60	Loamy fine sand	SM	A-2	0	0	100	100	55-80	20-35	15-20	NP-5
SmB:												
Simeon---------	0-13	Loamy sand	SM, SP-SM	A-2, A-3	0	0	95-100	90-100	51-95	5-35	10-20	NP-5
	13-60	Coarse sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0	90-100	80-100	35-95	0-30	10-20	NP-5
StD2:												
Steinauer------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	85-100	55-90	30-50	15-25
	6-18	Clay loam	CH, CL	A-6, A-7	0	0-5	90-100	90-100	90-100	70-90	30-55	12-30
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	90-100	90-100	90-100	60-75	25-55	10-30
StF:												
Steinauer------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	85-100	55-90	30-50	15-25
	6-18	Clay loam	CH, CL	A-6, A-7	0	0-5	90-100	90-100	90-100	70-90	30-55	12-30
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	90-100	90-100	90-100	60-75	25-55	10-30
StG:												
Steinauer------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	90-100	85-100	55-90	30-50	15-25
	6-18	Clay loam	CH, CL	A-6, A-7	0	0-5	90-100	90-100	90-100	70-90	30-55	12-30
	18-60	Clay loam	CH, CL	A-6, A-7	0	0-5	90-100	90-100	90-100	60-75	25-55	10-30
ThC:												
Thurman--------	0-10	Loamy fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	90-100	5-40	15-20	NP-5
	10-16	Loamy fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	90-100	5-40	15-20	NP-5
	16-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-95	5-35	15-20	NP-5
TkD:												
Thurman--------	0-10	Loamy fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	90-100	5-40	15-20	NP-5
	10-16	Loamy fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	90-100	5-40	15-20	NP-5
	16-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-95	5-35	15-20	NP-5
Monona Variant-	0-13	Fine sandy loam	SM	A-4	0	0	100	100	70-100	35-50	15-20	NP-5
	13-60	Silt loam	CL, ML	A-6	0	0	100	100	95-100	95-100	30-45	5-20
UaF2:												
Uly----------	0-8	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	20-40	2-20
	8-23	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-40	3-15
	23-60	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-40	3-15
UbF:												
Uly----------	0-8	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	20-40	2-20
	8-23	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-40	3-15
	23-60	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-40	3-15
Coly----------	0-4	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	85-100	85-100	20-45	2-20
	4-60	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	85-100	20-40	2-15
UcF2:												
Uly----------	0-8	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	20-40	2-20
	8-23	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-40	3-15
	23-60	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-40	3-15
Coly----------	0-4	Silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	85-100	85-100	20-45	2-20
	4-60	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	85-100	20-40	2-15

ENGINEERING INDEX PROPERTIES--Continued
Butler County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
UhF2:												
Uly----------	0-8	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	20-40	2-20
	8-23	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-40	3-15
	23-60	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-40	3-15
Hobbs----------	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-20
	7-25	Stratified silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-20
	25-60	Silt loam	CL, CL-ML, MH	A-4, A-6, A-7	0	0	100	100	95-100	80-100	25-55	5-25
UkC2:												
Uly Variant----	0-6	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	11-22
	6-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-50	14-28
	15-80	Silt loam	CL	A-4, A-6	0	0	100	100	100	95-100	28-40	8-18
W:												
Water----------	---	---	---	---	---	---	---	---	---	---	---	---
WoB:												
Wood River-----	0-9	Silt loam	ML, CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	20-40	3-15
	9-33	Silty clay	CH, CL	A-7	0	0	100	100	95-100	95-100	45-65	30-40
	33-60	Silt loam	CH, CL, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	95-100	20-60	5-40
Zk:												
Zook----------	0-13	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-40	5-15
	13-60	Silty clay	CH	A-7	0	0	100	100	95-100	95-100	60-85	35-55
Zo:												
Zook----------	0-6	Silty clay loam	CH, CL	A-7	0	0	100	100	95-100	95-100	45-65	20-35
	6-60	Silty clay	CH	A-7	0	0	100	100	95-100	95-100	60-85	35-55

PHYSICAL PROPERTIES OF THE SOILS
Butler County, Nebraska: Published

Physical Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K-sat). The estimates in the table indicate the rate of water movement, in micrometers per second (um/sec), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in this table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.

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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					

2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.

3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.

5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.

6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.

7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.

8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
AED:														
Arents, Earthen Dam-	---			---	---	---	---	---	---	---	---	-	---	---
Af:														
Alda---------	0-14	65	27	5-12	1.40-1.60	2.00-6.00	0.16-0.18	0.0-2.9	2.0-4.0	.20	.20	4	3	86
	14-26	66	28	3-10	1.40-1.60	2.00-6.00	0.15-0.17	0.0-2.9	0.5-1.0	.20	.20			
	26-60	92	6	0-2	1.50-1.70	19.98-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.10	.15			
Ba:														
Barney-------	0-7	44	41	10-20	1.40-1.50	0.60-2.00	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	5	4L	86
	7-14			3-10	1.60-1.80	1.98-19.98	0.09-0.14	0.0-2.9	0.0-0.5	.17	.17			
	14-60	97	1	0-5	1.70-1.90	5.95-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
Bd:														
Blendon------	0-15	66	20	10-18	1.25-1.35	2.00-6.00	0.11-0.17	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	15-44	65	20	10-20	1.20-1.30	0.57-5.95	0.11-0.18	0.0-2.9	1.0-2.0	.20	.20			
	44-60	96	1	0-7	1.55-1.75	5.95-19.98	0.03-0.06	0.0-2.9	0.0-0.5	.15	.15			
BdC:														
Blendon------	0-15	66	20	10-18	1.25-1.35	2.00-6.00	0.11-0.17	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	15-44	65	20	10-20	1.20-1.30	0.57-5.95	0.11-0.18	0.0-2.9	1.0-2.0	.20	.20			
	44-60	96	1	0-7	1.55-1.75	5.95-19.98	0.03-0.06	0.0-2.9	0.0-0.5	.15	.15			
Bf:														
Blendon------	0-15	66	20	10-18	1.25-1.35	2.00-6.00	0.11-0.17	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	15-44	65	20	10-20	1.20-1.30	0.57-5.95	0.11-0.18	0.0-2.9	1.0-2.0	.20	.20			
	44-60	96	1	0-7	1.55-1.75	5.95-19.98	0.03-0.06	0.0-2.9	0.0-0.5	.15	.15			
Muir---------	0-20	10	68	18-27	1.30-1.45	0.60-2.00	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	20-36	9	64	18-35	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	1.0-3.0	.32	.32			
	36-60	9	64	18-35	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.32	.32			
Bh:														
Boel---------	0-14	42	38	15-25	1.30-1.40	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.28	.28	3	4L	86
	14-60	96	1	0-6	1.50-1.60	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.20	.20			
Bn:														
Boel---------	0-17	42	38	15-25	1.30-1.40	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.28	.28	3	4L	86
	17-60	96	1	0-6	1.50-1.60	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.20	.20			
Alda---------	0-14	65	27	5-12	1.40-1.60	2.00-6.00	0.16-0.18	0.0-2.9	2.0-4.0	.20	.20	4	3	86
	14-26	66	28	3-10	1.40-1.60	2.00-6.00	0.15-0.17	0.0-2.9	0.5-1.0	.20	.20			
	26-60	92	6	0-2	1.50-1.70	19.98-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.10	.15			
Br:														
Brocksburg---	0-12	64	26	5-15	1.40-1.60	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	12-28	38	36	20-30	1.30-1.50	0.60-2.00	0.15-0.19	3.0-5.9	1.0-2.0	.28	.28			
	28-40	96	2	0-5	1.50-1.70	19.98-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.10	.17			
BsD:														
Burchard-----	0-12	43	38	10-27	1.30-1.50	0.60-2.00	0.20-0.22	3.0-5.9	2.0-4.0	.28	.28	5	6	48
	12-32	35	34	27-35	1.40-1.60	0.20-0.60	0.15-0.17	3.0-5.9	0.5-1.0	.37	.37			
	32-60	36	40	18-30	1.40-1.60	0.20-0.60	0.15-0.17	3.0-5.9	0.5-1.0	.37	.37			
BsE:														
Burchard-----	0-12	43	38	10-27	1.30-1.50	0.60-2.00	0.20-0.22	3.0-5.9	2.0-4.0	.28	.28	5	6	48
	12-32	35	34	27-35	1.40-1.60	0.20-0.60	0.15-0.17	3.0-5.9	0.5-1.0	.37	.37			
	32-60	36	40	18-30	1.40-1.60	0.20-0.60	0.15-0.17	3.0-5.9	0.5-1.0	.37	.37			
BtE2:														
Burchard-----	0-7	36	40	18-30	1.40-1.60	0.20-0.60	0.17-0.19	3.0-5.9	2.0-4.0	.28	.28	5	6	48
	7-25	35	34	27-35	1.40-1.60	0.20-0.60	0.15-0.17	3.0-5.9	0.5-1.0	.37	.37			
	25-60	36	40	18-30	1.40-1.60	0.20-0.60	0.15-0.17	3.0-5.9	0.5-1.0	.37	.37			
Steinauer----	0-9	34	37	27-32	1.20-1.35	0.20-0.60	0.19-0.22	3.0-5.9	0.5-2.0	.32	.32	5	4L	86
	9-18	34	37	27-32	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	18-60	34	37	24-35	1.30-1.65	0.20-0.60	0.16-0.19	3.0-5.9	0.0-0.5	.37	.37			
Bu:														
Butler-------	0-14	25	53	18-27	1.20-1.40	0.60-2.00	0.22-0.24	3.0-5.9	2.0-4.0	.37	.37	3	6	48
	14-35	5	45	45-55	1.10-1.20	0.06-0.20	0.11-0.13	6.0-8.9	1.0-2.0	.37	.37			
	35-40	7	54	32-45	1.10-1.30	0.20-0.60	0.14-0.20	6.0-8.9	0.5-1.0	.37	.37			
	40-60	23	50	20-35	1.20-1.40	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
CfG:														
Coly---------	0-4	11	68	18-24	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	4L	86
	4-60	11	68	18-24	1.30-1.50	0.60-2.00	0.17-0.22	0.0-2.9	0.5-1.0	.43	.43			
CoB:														
Cozad--------	0-12	12	70	11-25	1.30-1.40	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.32	.32	5	6	48
	12-29	14	72	10-18	1.30-1.40	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	29-60	60	27	8-18	1.20-1.50	0.60-2.00	0.15-0.19	0.0-2.9	0.0-0.5	.24	.24			
CrD2:														
Crofton------	0-6	9	67	20-27	1.20-1.30	0.60-2.00	0.21-0.24	0.0-2.9	0.5-2.0	.43	.43	5	4L	86
	6-60	11	68	15-27	1.10-1.20	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
CrE2:														
Crofton------	0-6	9	67	20-27	1.20-1.30	0.60-2.00	0.21-0.24	0.0-2.9	0.5-2.0	.43	.43	5	4L	86
	6-60	11	68	15-27	1.10-1.20	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
CrF2:														
Crofton------	0-6	9	67	20-27	1.20-1.30	0.60-2.00	0.21-0.24	0.0-2.9	0.5-2.0	.43	.43	5	4L	86
	6-60	11	68	15-27	1.10-1.20	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
CrG:														
Crofton------	0-6	9	67	20-27	1.20-1.30	0.60-2.00	0.21-0.24	0.0-2.9	0.5-2.0	.43	.43	5	4L	86
	6-60	11	68	15-27	1.10-1.20	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
Fm:														
Fillmore-----	0-12	25	53	18-27	1.30-1.40	0.60-2.00	0.21-0.24	0.0-2.9	2.0-4.0	.37	.37	3	6	48
	12-34	5	45	45-55	1.10-1.30	0.00-0.06	0.11-0.14	6.0-8.9	1.0-2.0	.37	.37			
	34-60	20	48	18-45	1.30-1.50	0.06-2.00	0.10-0.22	3.0-5.9	0.0-0.5	.43	.43			

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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
Gb:														
Gibbon-------	0-14	7	62	27-35	1.25-1.35	0.20-0.60	0.21-0.23	3.0-5.9	2.0-4.0	.32	.32	5	4L	86
	14-36	9	67	20-27	1.30-1.50	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.32	.32			
	36-60			15-25	1.50-1.70	0.57-5.95	0.16-0.20	0.0-2.9	0.5-1.0	.32	.32			
GP:														
Pits---------	0-60	95	1	0-8	1.70-2.00	6.00-20.00	0.02-0.09	0.0-2.9	0.0-0.5	.10	.17	2	8	0
Gr:														
Grigston-----	0-19	9	67	21-26	1.30-1.40	0.60-2.00	0.21-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	19-36	9	65	21-30	1.35-1.45	0.60-2.00	0.18-0.22	0.0-2.9	1.0-2.0	.32	.32			
	36-60	9	65	21-30	1.30-1.45	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.32	.32			
Ha:														
Hall---------	0-18	11	68	15-27	1.30-1.40	0.60-2.00	0.20-0.24	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	18-39	7	65	20-35	1.30-1.50	0.60-2.00	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43			
	39-60	10	68	15-30	1.30-1.40	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
Hc:														
Hastings-----	0-10	26	54	15-25	1.20-1.40	0.60-2.00	0.20-0.23	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	10-40	7	54	35-42	1.30-1.40	0.20-0.60	0.11-0.18	6.0-8.9	0.5-1.0	.43	.43			
	40-60	18	50	25-38	1.20-1.40	0.60-2.00	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
HcB:														
Hastings-----	0-10	26	54	15-25	1.20-1.40	0.60-2.00	0.20-0.23	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	10-40	7	54	35-42	1.30-1.40	0.20-0.60	0.11-0.18	6.0-8.9	0.5-1.0	.43	.43			
	40-60	18	50	25-38	1.20-1.40	0.60-2.00	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
HcC:														
Hastings-----	0-10	26	54	15-25	1.20-1.40	0.60-2.00	0.20-0.23	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	10-40	7	54	35-42	1.30-1.40	0.20-0.60	0.11-0.18	6.0-8.9	0.5-1.0	.43	.43			
	40-60	18	50	25-38	1.20-1.40	0.60-2.00	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
HcD:														
Hastings-----	0-10	26	54	15-25	1.20-1.40	0.60-2.00	0.20-0.23	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	10-40	7	54	35-42	1.30-1.40	0.20-0.60	0.11-0.18	6.0-8.9	0.5-1.0	.43	.43			
	40-60	18	50	25-38	1.20-1.40	0.60-2.00	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
HdC2:														
Hastings-----	0-6	18	48	28-40	1.05-1.25	0.20-0.60	0.17-0.20	3.0-5.9	1.0-2.0	.37	.37	5	7	38
	6-27	7	54	35-42	1.20-1.45	0.20-0.60	0.11-0.20	6.0-8.9	0.5-1.0	.43	.43			
	27-60	18	50	25-38	1.30-1.50	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
HdD2:														
Hastings-----	0-6	18	48	28-40	1.05-1.25	0.20-0.60	0.17-0.20	3.0-5.9	1.0-2.0	.37	.37	5	7	38
	6-27	7	54	35-42	1.20-1.45	0.20-0.60	0.11-0.20	6.0-8.9	0.5-1.0	.43	.43			
	27-60	18	50	25-38	1.30-1.50	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
Hg:														
Hobbs--------	0-7	11	68	15-27	1.20-1.40	0.60-2.00	0.21-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	7-25			15-27	1.20-1.40	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.32	.32			
	25-60	10	68	15-30	1.20-1.40	0.60-2.00	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
HhB:														
Hobbs--------	0-7	11	68	15-27	1.20-1.40	0.60-2.00	0.21-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	7-25			15-27	1.20-1.40	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.32	.32			
	25-60	10	68	15-30	1.20-1.40	0.60-2.00	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
HkB:														
Holder-------	0-13	9	67	20-27	1.20-1.45	0.60-2.00	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	13-42	7	62	28-35	1.20-1.40	0.60-2.00	0.18-0.20	3.0-5.9	0.5-2.0	.43	.43			
	42-60	9	66	20-30	1.40-1.60	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
INT:														
Aquolls------	0-72			---	---	---	---	---	---	---	---	-	---	0
IvC:														
Inavale------	0-8	85	9	2-10	1.50-1.60	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	8-21	92	1	3-10	1.50-1.60	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.17	.17			
	21-60	92	1	3-10	1.50-1.60	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
IwC:														
Inavale------	0-8	85	9	2-10	1.50-1.60	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	8-21	92	1	3-10	1.50-1.60	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.17	.17			
	21-60	92	1	3-10	1.50-1.60	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
Boel---------	0-14	67	20	8-18	1.50-1.70	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20	3	3	86
	14-60	96	1	0-6	1.50-1.60	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.20	.20			
JuC:														
Judson-------	0-20	9	65	24-27	1.30-1.35	0.60-2.00	0.21-0.23	0.0-2.9	4.0-5.0	.28	.28	5	6	48
	20-42	7	61	30-35	1.35-1.45	0.60-2.00	0.21-0.23	3.0-5.9	2.0-3.0	.43	.43			
	42-60	7	64	25-32	1.35-1.45	0.60-2.00	0.21-0.23	3.0-5.9	0.0-1.0	.43	.43			
Kz:														
Kezan--------	0-6			20-27	1.20-1.40	0.60-2.00	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	6-13	9	62	24-35	1.20-1.40	0.60-2.00	0.18-0.22	0.0-2.9	0.5-1.0	.32	.32			
	13-60	9	62	24-35	1.20-1.40	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
La:														
Lamo---------	0-12	7	66	18-35	1.30-1.60	0.20-2.00	0.19-0.23	3.0-5.9	1.0-3.0	.32	.32	5	4L	86
	12-60	7	63	25-35	1.30-1.50	0.20-0.60	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
LoC2:														
Longford-----	0-7	20	49	27-35	1.30-1.40	0.20-0.60	0.21-0.23	3.0-5.9	2.0-4.0	.32	.32	5	7	38
	7-48	8	52	35-45	1.35-1.50	0.06-0.20	0.14-0.20	6.0-8.9	0.5-2.0	.32	.32			
	48-60	20	53	20-35	1.30-1.40	0.20-0.60	0.15-0.20	3.0-5.9	0.0-0.5	.37	.37			
LoD2:														
Longford-----	0-7	20	49	27-35	1.30-1.40	0.20-0.60	0.21-0.23	3.0-5.9	2.0-4.0	.32	.32	5	7	38
	7-48	8	52	35-45	1.35-1.50	0.06-0.20	0.14-0.20	6.0-8.9	0.5-2.0	.32	.32			
	48-60	20	53	20-35	1.30-1.40	0.20-0.60	0.15-0.20	3.0-5.9	0.0-0.5	.37	.37			
M-W:														
Miscellaneous Water-------	---			---	---	---	---	---	---	---	---	-	---	---

PHYSICAL PROPERTIES OF THE SOILS
Butler County, Nebraska: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
MnC:														
Monona-------	0-13	9	67	20-27	1.25-1.30	0.60-2.00	0.22-0.24	3.0-5.9	2.0-4.0	.28	.28	5	6	48
	13-42	9	65	24-28	1.30-1.35	0.60-2.00	0.20-0.22	3.0-5.9	0.5-2.0	.43	.43			
	42-60	11	68	18-24	1.35-1.40	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
MnD2:														
Pohocco------	0-13	9	67	20-27	1.25-1.30	0.60-2.00	0.22-0.24	3.0-5.9	0.5-2.0	.37	.37	5	6	48
	13-42	9	64	20-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	42-60	9	67	20-27	1.35-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
MnE:														
Monona-------	0-13	9	67	20-27	1.25-1.30	0.60-2.00	0.22-0.24	3.0-5.9	2.0-4.0	.28	.28	5	6	48
	13-42	9	65	24-28	1.30-1.35	0.60-2.00	0.20-0.22	3.0-5.9	0.5-2.0	.43	.43			
	42-60	11	68	18-24	1.35-1.40	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
MnF:														
Monona-------	0-13	9	67	20-27	1.25-1.30	0.60-2.00	0.22-0.24	3.0-5.9	2.0-4.0	.28	.28	5	6	48
	13-42	9	65	24-28	1.30-1.35	0.60-2.00	0.20-0.22	3.0-5.9	0.5-2.0	.43	.43			
	42-60	11	68	18-24	1.35-1.40	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
Mu:														
Muir---------	0-20	10	68	18-27	1.30-1.45	0.60-2.00	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	20-36	9	64	18-35	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	1.0-3.0	.32	.32			
	36-60	9	64	18-35	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.32	.32			
MuB:														
Muir---------	0-20	10	68	18-27	1.30-1.45	0.60-2.00	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	20-36	9	64	18-35	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	1.0-3.0	.32	.32			
	36-60	9	64	18-35	1.30-1.50	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.32	.32			
Ob:														
Olbut--------	0-6	24	52	20-27	1.20-1.30	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.37	.37	3	6	48
	6-20	6	47	40-55	1.30-1.40	0.06-0.20	0.10-0.13	6.0-8.9	1.0-3.0	.37	.37			
	20-29	18	52	20-40	1.30-1.40	0.20-0.60	0.16-0.20	6.0-8.9	0.5-1.0	.43	.43			
	29-80	25	53	20-25	1.20-1.40	0.60-2.00	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
Butler-------	0-14	25	53	18-27	1.20-1.40	0.60-2.00	0.22-0.24	3.0-5.9	2.0-4.0	.37	.37	3	6	48
	14-35	5	45	45-55	1.10-1.20	0.06-0.20	0.11-0.13	6.0-8.9	1.0-2.0	.37	.37			
	35-40	7	54	32-45	1.10-1.30	0.20-0.60	0.14-0.20	6.0-8.9	0.5-1.0	.37	.37			
	40-60	23	50	20-35	1.20-1.40	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
OvB:														
Ovina--------	0-16	87	7	3-10	1.30-1.50	5.95-19.98	0.10-0.12	0.0-2.9	1.0-2.0	.17	.17	5	2	134
	16-21	67	20	8-18	1.30-1.50	2.00-6.00	0.15-0.17	0.0-2.9	1.0-2.0	.20	.20			
	21-60	64	26	5-15	1.40-1.60	2.00-6.00	0.14-0.16	0.0-2.9	0.5-1.0	.20	.20			
OxC:														
Ovina--------	0-16	87	7	3-10	1.30-1.50	5.95-19.98	0.10-0.12	0.0-2.9	1.0-2.0	.17	.17	5	2	134
	16-21	67	20	8-18	1.30-1.50	2.00-6.00	0.15-0.17	0.0-2.9	1.0-2.0	.20	.20			
	21-60	64	26	5-15	1.40-1.60	2.00-6.00	0.14-0.16	0.0-2.9	0.5-1.0	.20	.20			
Thurman------	0-10	85	7	5-12	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	1.0-2.0	.17	.17	5	2	134
	10-16	85	7	5-12	1.55-1.75	5.95-19.98	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
	16-60	95	1	2-7	1.60-1.80	5.95-19.98	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
PaC2:														
Pawnee-------	0-9	34	32	30-38	1.40-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.37	.37	5	4	86
	9-38	28	29	40-46	1.50-1.70	0.00-0.06	0.09-0.11	6.0-8.9	0.0-1.0	.32	.32			
	38-60	34	36	25-35	1.40-1.50	0.06-0.20	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
PaD2:														
Pawnee-------	0-9	34	32	30-38	1.40-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.37	.37	5	4	86
	9-38	28	29	40-46	1.50-1.70	0.00-0.06	0.09-0.11	6.0-8.9	0.0-1.0	.32	.32			
	38-60	34	36	25-35	1.40-1.50	0.06-0.20	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
PoC2:														
Pohocco------	0-7	7	62	27-35	1.35-1.40	0.60-2.00	0.21-0.23	3.0-5.9	0.5-2.0	.37	.37	5	7	38
	7-27	9	64	20-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	27-60	9	67	20-27	1.35-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
PoD2:														
Pohocco------	0-7	7	62	27-35	1.35-1.40	0.60-2.00	0.21-0.23	3.0-5.9	0.5-2.0	.37	.37	5	7	38
	7-27	9	64	20-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	27-60	9	67	20-27	1.35-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
PoE2:														
Pohocco------	0-7	7	62	27-35	1.35-1.40	0.60-2.00	0.21-0.23	3.0-5.9	0.5-2.0	.37	.37	5	7	38
	7-27	9	64	20-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	27-60	9	67	20-27	1.35-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
PsD2:														
Pohocco------	0-7	7	62	27-35	1.35-1.40	0.60-2.00	0.21-0.23	3.0-5.9	0.5-2.0	.37	.37	5	7	38
	7-27	9	64	20-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	27-60	9	67	20-27	1.35-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
Crofton------	0-6	9	67	20-27	1.20-1.30	0.60-2.00	0.21-0.24	0.0-2.9	0.5-2.0	.43	.43	5	4L	86
	6-60	11	68	15-27	1.10-1.20	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
PsE2:														
Pohocco------	0-7	7	62	27-35	1.35-1.40	0.60-2.00	0.21-0.23	3.0-5.9	0.5-2.0	.37	.37	5	7	38
	7-27	9	64	20-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	27-60	9	67	20-27	1.35-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
Crofton------	0-6	9	67	20-27	1.20-1.30	0.60-2.00	0.21-0.24	0.0-2.9	0.5-2.0	.43	.43	5	4L	86
	6-60	11	68	15-27	1.10-1.20	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
PsF2:														
Pohocco------	0-7	7	62	27-35	1.35-1.40	0.60-2.00	0.21-0.23	3.0-5.9	0.5-2.0	.37	.37	5	7	38
	7-27	9	64	20-35	1.35-1.45	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	27-60	9	67	20-27	1.35-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
Crofton------	0-6	9	67	20-27	1.20-1.30	0.60-2.00	0.21-0.24	0.0-2.9	0.5-2.0	.43	.43	5	4L	86
	6-60	11	68	15-27	1.10-1.20	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			

PHYSICAL PROPERTIES OF THE SOILS
Butler County, Nebraska: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
Sa:														
Saltine------	0-9	11	68	15-27	1.30-1.40	0.60-2.00	0.20-0.24	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	9-25	7	64	18-40	1.20-1.30	0.60-2.00	0.17-0.22	3.0-5.9	0.0-0.5	.43	.43			
	25-60	7	63	20-40	1.40-1.50	0.20-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
Gibbon-------	0-14	10	68	20-25	1.40-1.60	0.60-2.00	0.21-0.23	0.0-2.9	2.0-4.0	.32	.32	5	4L	86
	14-36	9	67	20-27	1.30-1.50	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.32	.32			
	36-60			15-25	1.50-1.70	0.57-5.95	0.16-0.20	0.0-2.9	0.5-1.0	.32	.32			
Sc:														
Scott--------	0-10	26	53	15-27	1.25-1.40	0.60-2.00	0.21-0.24	0.0-2.9	2.0-4.0	.37	.37	3	6	48
	10-36	6	47	40-55	1.20-1.40	0.00-0.06	0.08-0.16	6.0-8.9	1.0-2.0	.37	.37			
	36-49	19	48	27-40	1.15-1.40	0.20-0.60	0.18-0.20	6.0-8.9	0.5-1.0	.43	.43			
	49-60	24	50	18-35	1.30-1.50	0.60-2.00	0.14-0.22	3.0-5.9	0.5-1.0	.43	.43			
Sh:														
Aksarben-----	0-12	20	49	27-35	1.35-1.55	0.60-2.00	0.17-0.23	3.0-5.9	2.0-4.0	.32	.32	5	7	38
	12-46	7	54	35-42	1.35-1.55	0.20-0.60	0.16-0.18	3.0-5.9	1.0-2.0	.43	.43			
	46-60	18	52	24-35	1.40-1.60	0.60-2.00	0.18-0.20	3.0-5.9	0.5-1.0	.43	.43			
ShC:														
Aksarben-----	0-12	20	49	27-35	1.35-1.55	0.60-2.00	0.17-0.23	3.0-5.9	2.0-4.0	.32	.32	5	7	38
	12-46	7	54	35-42	1.35-1.55	0.20-0.60	0.16-0.18	3.0-5.9	1.0-2.0	.43	.43			
	46-60	18	52	24-35	1.40-1.60	0.60-2.00	0.18-0.20	3.0-5.9	0.5-1.0	.43	.43			
ShC2:														
Yutan--------	0-7	8	55	35-40	1.05-1.25	0.20-0.60	0.16-0.19	3.0-5.9	0.5-2.0	.37	.37	5	4	86
	7-36	8	55	33-42	1.25-1.45	0.20-0.60	0.16-0.19	3.0-5.9	0.5-1.0	.43	.43			
	36-60	7	64	24-33	1.25-1.45	0.60-2.00	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
ShD:														
Aksarben-----	0-12	20	49	27-35	1.35-1.55	0.60-2.00	0.17-0.23	3.0-5.9	2.0-4.0	.32	.32	5	7	38
	12-46	7	54	35-42	1.35-1.55	0.20-0.60	0.16-0.18	3.0-5.9	1.0-2.0	.43	.43			
	46-60	18	52	24-35	1.40-1.60	0.60-2.00	0.18-0.20	3.0-5.9	0.5-1.0	.43	.43			
ShD2:														
Yutan--------	0-7	8	55	35-40	1.05-1.25	0.20-0.60	0.16-0.19	3.0-5.9	0.5-2.0	.37	.37	5	4	86
	7-28	8	55	33-42	1.25-1.45	0.20-0.60	0.16-0.19	3.0-5.9	0.5-1.0	.43	.43			
	28-60	7	64	24-33	1.25-1.45	0.60-2.00	0.18-0.20	3.0-5.9	0.0-0.5	.43	.43			
Sk:														
Silver Creek-	0-15	24	52	20-27	1.20-1.45	0.60-2.00	0.20-0.23	0.0-2.9	2.0-4.0	.32	.32	2	6	48
	15-23	8	51	35-48	1.20-1.45	0.06-0.20	0.11-0.18	6.0-8.9	0.5-1.0	.32	.32			
	23-50	64	19	10-24	1.35-1.70	2.00-6.00	0.12-0.17	0.0-2.9	0.0-0.5	.28	.28			
	50-60	85	7	2-15	1.55-1.75	5.95-19.98	0.08-0.10	0.0-2.9	0.0-0.5	.17	.17			
SmB:														
Simeon-------	0-13	82	9	5-12	1.30-1.50	5.95-19.98	0.08-0.14	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	13-60	90	4	2-10	1.50-1.70	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
StD2:														
Steinauer----	0-6	34	37	27-32	1.20-1.35	0.20-0.60	0.19-0.22	3.0-5.9	0.5-2.0	.32	.32	5	4L	86
	6-18	34	37	27-32	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	18-60	34	37	24-35	1.30-1.65	0.20-0.60	0.16-0.19	3.0-5.9	0.0-0.5	.37	.37			
StF:														
Steinauer----	0-6	34	37	27-32	1.20-1.35	0.20-0.60	0.19-0.22	3.0-5.9	0.5-2.0	.32	.32	5	4L	86
	6-18	34	37	27-32	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	18-60	34	37	24-35	1.30-1.65	0.20-0.60	0.16-0.19	3.0-5.9	0.0-0.5	.37	.37			
StG:														
Steinauer----	0-6	34	37	27-32	1.20-1.35	0.20-0.60	0.19-0.22	3.0-5.9	0.5-2.0	.32	.32	5	4L	86
	6-18	34	37	27-32	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	18-60	34	37	24-35	1.30-1.65	0.20-0.60	0.16-0.19	3.0-5.9	0.0-0.5	.37	.37			
ThC:														
Thurman------	0-10	85	7	5-12	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	1.0-2.0	.17	.17	5	2	134
	10-16	85	7	5-12	1.55-1.75	5.95-19.98	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
	16-60	95	1	2-7	1.60-1.80	5.95-19.98	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
TkD:														
Thurman------	0-10	85	7	5-12	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	1.0-2.0	.17	.17	5	2	134
	10-16	85	7	5-12	1.55-1.75	5.95-19.98	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
	16-60	95	1	2-7	1.60-1.80	5.95-19.98	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
Monona Variant-----	0-13	67	20	8-18	1.40-1.60	2.00-6.00	0.16-0.18	0.0-2.9	1.0-3.0	.20	.20	4	3	86
	13-60	9	67	20-27	1.30-1.35	0.60-2.00	0.20-0.22	3.0-5.9	0.5-1.0	.43	.43			
UaF2:														
Uly----------	0-8	11	67	17-27	1.20-1.45	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	8-23	9	66	20-30	1.25-1.45	0.60-2.00	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
	23-60	10	68	18-27	1.25-1.45	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.43	.43			
UbF:														
Uly----------	0-8	11	67	17-27	1.20-1.45	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	8-23	9	66	20-30	1.25-1.45	0.60-2.00	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
	23-60	10	68	18-27	1.25-1.45	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.43	.43			
Coly---------	0-4	11	68	18-24	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	4L	86
	4-60	11	68	18-24	1.30-1.50	0.60-2.00	0.17-0.22	0.0-2.9	0.5-1.0	.43	.43			
UcF2:														
Coly---------	0-4	11	68	18-24	1.30-1.50	0.60-2.00	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	4L	86
	4-60	11	68	18-24	1.30-1.50	0.60-2.00	0.17-0.22	0.0-2.9	0.5-1.0	.43	.43			
Uly----------	0-8	11	67	17-27	1.20-1.45	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	8-23	9	66	20-30	1.25-1.45	0.60-2.00	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
	23-60	10	68	18-27	1.25-1.45	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.43	.43			

PHYSICAL PROPERTIES OF THE SOILS
Butler County, Nebraska: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
UhF2:														
Uly----------	0-8	11	67	17-27	1.20-1.45	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	8-23	9	66	20-30	1.25-1.45	0.60-2.00	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
	23-60	10	68	18-27	1.25-1.45	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.43	.43			
Hobbs--------	0-7	11	68	15-27	1.20-1.40	0.60-2.00	0.21-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	7-25			15-27	1.20-1.40	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.32	.32			
	25-60	10	68	15-30	1.20-1.40	0.60-2.00	0.18-0.22	0.0-2.9	0.5-1.0	.43	.43			
UkC2:														
Uly Variant--	0-6	20	48	28-35	1.20-1.40	0.20-0.60	0.21-0.23	3.0-5.9	1.0-2.0	.37	.37	5	7	38
	6-15	8	55	35-40	1.30-1.40	0.20-0.60	0.18-0.20	6.0-8.9	0.5-1.0	.37	.37			
	15-80	26	52	18-25	1.20-1.40	0.60-2.00	0.20-0.22	3.0-5.9	0.0-0.5	.37	.37			
W:														
Water--------	---			---	---	---	---	---	---	---	---	-	---	0
WoB:														
Wood River---	0-9	27	54	14-24	1.10-1.30	0.60-2.00	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	2	6	48
	9-33	8	52	35-45	1.30-1.40	0.06-0.20	0.11-0.20	6.0-8.9	0.5-1.0	.37	.37			
	33-60	23	50	19-35	1.10-1.30	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
Zk:														
Zook---------	0-13	25	52	20-26	1.30-1.35	0.60-2.00	0.22-0.24	3.0-5.9	2.0-4.0	.37	.37	4	6	48
	13-60	8	52	36-45	1.30-1.45	0.06-0.20	0.11-0.13	6.0-8.9	2.0-4.0	.28	.28			
Zo:														
Zook---------	0-6	8	55	35-40	1.30-1.35	0.20-0.60	0.21-0.23	6.0-8.9	5.0-7.0	.37	.37	5	7	38
	6-60	8	52	36-45	1.30-1.45	0.06-0.20	0.11-0.13	6.0-8.9	2.0-4.0	.28	.28			

CHEMICAL PROPERTIES OF THE SOILS
Butler County, Nebraska

The Chemical Properties table shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils. Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. Soils having a high cation-exchange capacity can retain cations. The ability to retain cations helps to prevent the pollution of ground water.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water and can be dissolved and removed by water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

CHEMICAL PROPERTIES OF THE SOILS--Continued
Butler County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
AED:							
Arents, Earthen Dam----------	---	---	---	---	---	---	---
Af:							
Alda----------	0-14	5.0-20	6.6-8.4	0-10	0	0.0-4.0	0-9
	14-26	5.0-10	7.4-8.4	1-15	0	0.0-4.0	0-9
	26-60	0.0-5.0	6.6-8.4	0-5	0	0.0-4.0	0-9
Ba:							
Barney----------	0-7	11-22	6.6-8.4	0-5	0	0	0
	7-14	2.0-7.0	6.6-8.4	0	0	0	0
	14-60	0.0-4.0	6.6-7.8	0	0	0	0
Bd:							
Blendon---------	0-15	10-20	5.6-7.3	0	0	0.0-2.0	0
	15-44	10-20	6.1-7.3	0	0	0.0-2.0	0
	44-60	0.0-5.0	6.1-7.8	0-5	0	0.0-2.0	0
BdC:							
Blendon---------	0-15	10-20	5.6-7.3	0	0	0.0-2.0	0
	15-44	10-20	6.1-7.3	0	0	0.0-2.0	0
	44-60	0.0-5.0	6.1-7.8	0-5	0	0.0-2.0	0
Bf:							
Blendon---------	0-15	10-20	5.6-7.3	0	0	0.0-2.0	0
	15-44	10-20	6.1-7.3	0	0	0.0-2.0	0
	44-60	0.0-5.0	6.1-7.8	0-5	0	0.0-2.0	0
Muir----------	0-20	10-25	5.6-7.3	---	---	---	---
	20-36	10-25	6.1-7.3	---	---	---	---
	36-60	10-25	6.1-8.4	---	---	---	---
Bh:							
Boel----------	0-14	13-24	6.6-8.4	0-5	0	0	0
	14-60	0.0-4.0	6.6-8.4	0-5	0	0	0
Bn:							
Boel----------	0-17	13-24	6.6-8.4	0-5	0	0	0
	17-60	0.0-4.0	6.6-8.4	0-5	0	0	0
Alda----------	0-14	5.0-20	6.6-8.4	0-10	0	0.0-4.0	0-9
	14-26	5.0-10	7.4-8.4	1-15	0	0.0-4.0	0-9
	26-60	0.0-5.0	6.6-8.4	0-5	0	0.0-4.0	0-9
Br:							
Brocksburg------	0-12	5.0-15	6.1-7.3	0	0	0	0
	12-28	15-25	6.6-7.8	0	0	0	0
	28-40	0.0-5.0	6.6-7.8	0	0	0	0
BsD:							
Burchard--------	0-12	15-25	5.6-7.3	0	0	0	0
	12-32	15-25	6.1-7.3	0	0	0	0
	32-60	15-25	7.4-8.4	5-10	0	0	0
BsE:							
Burchard--------	0-12	15-25	5.6-7.3	0	0	0	0
	12-32	15-25	6.1-7.3	0	0	0	0
	32-60	15-25	7.4-8.4	5-10	0	0	0
BtE2:							
Burchard--------	0-7	15-25	5.6-7.3	0	0	0	0
	7-25	15-25	6.1-7.3	0	0	0	0
	25-60	15-25	7.4-8.4	5-10	0	0	0
Steinauer-------	0-9	15-25	7.4-8.4	1-10	0	0	0
	9-18	15-25	7.4-8.4	5-15	0	0	0
	18-60	15-25	7.9-8.4	5-20	0	0	0
Bu:							
Butler----------	0-14	18-27	5.1-6.5	0	0	0	0
	14-35	30-40	5.6-7.8	0	0	0	0
	35-40	20-35	6.6-8.4	0-5	0	0	0
	40-60	10-30	6.6-8.4	0-5	0	0	0
CfG:							
Coly----------	0-4	14-19	7.4-8.4	1-5	0	0	0
	4-60	13-18	7.4-8.4	5-10	0	0	0
CoB:							
Cozad----------	0-12	9.0-20	6.1-7.3	0	0	0	0
	12-29	8.0-13	6.1-7.8	0-5	0	0	0
	29-60	6.0-13	7.4-8.4	1-10	0	0	0
CrD2:							
Crofton---------	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-60	15-25	7.4-8.4	1-15	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Butler County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
CrE2:							
Crofton	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-60	15-25	7.4-8.4	1-15	0	0	0
CrF2:							
Crofton	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-60	15-25	7.4-8.4	1-15	0	0	0
CrG:							
Crofton	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-60	15-25	7.4-8.4	1-15	0	0	0
Fm:							
Fillmore	0-12	15-22	5.1-6.5	0	0	0	0
	12-34	32-40	5.6-7.8	0	0	0	0
	34-60	12-40	6.6-8.4	0-5	0	0	0
Gb:							
Gibbon	0-14	20-30	7.4-8.4	0-5	0	0.0-2.0	0
	14-36	14-20	7.4-8.4	5-15	0	0.0-2.0	0-5
	36-60	10-18	7.9-8.4	5-15	0	0.0-2.0	0-5
GP:							
Pits	0-60	0.0-5.0	6.6-8.4	0	0	0	0
Gr:							
Grigston	0-19	20-30	6.6-7.8	0	0	0	0
	19-36	15-30	7.4-8.4	5-10	0	0	0
	36-60	10-15	7.4-8.4	5-10	0	0	0
Ha:							
Hall	0-18	13-23	6.1-7.3	0	0	0	0
	18-39	15-27	6.1-7.8	0	0	0	0
	39-60	11-22	6.6-7.8	0-5	0	0	0
Hc:							
Hastings	0-10	12-22	5.6-6.5	0	0	0	0
	10-40	24-30	5.6-7.3	0	0	0	0
	40-60	17-27	6.1-8.4	0-5	0	0	0
HcB:							
Hastings	0-10	12-22	5.6-6.5	0	0	0	0
	10-40	24-30	5.6-7.3	0	0	0	0
	40-60	17-27	6.1-8.4	0-5	0	0	0
HcC:							
Hastings	0-10	12-22	5.6-6.5	0	0	0	0
	10-40	24-30	5.6-7.3	0	0	0	0
	40-60	17-27	6.1-8.4	0-5	0	0	0
HcD:							
Hastings	0-10	12-22	5.6-6.5	0	0	0	0
	10-40	24-30	5.6-7.3	0	0	0	0
	40-60	17-27	6.1-8.4	0-5	0	0	0
HdC2:							
Hastings	0-6	25-30	5.6-6.5	0	0	0	0
	6-27	18-28	5.6-7.3	0	0	0	0
	27-60	14-20	6.1-8.4	0-5	0	0	0
HdD2:							
Hastings	0-6	25-30	5.6-6.5	0	0	0	0
	6-27	18-28	5.6-7.3	0	0	0	0
	27-60	14-20	6.1-8.4	0-5	0	0	0
Hg:							
Hobbs	0-7	15-30	6.1-7.8	0	0	0	0
	7-25	10-20	6.1-7.8	0	0	0	0
	25-60	20-40	6.6-8.4	0-5	0	0	0
HhB:							
Hobbs	0-7	15-30	6.1-7.8	0	0	0	0
	7-25	10-20	6.1-7.8	0	0	0	0
	25-60	20-40	6.6-8.4	0-5	0	0	0
HkB:							
Holder	0-13	16-24	5.1-7.3	0	0	0	0
	13-42	19-26	6.1-7.8	0	0	0	0
	42-60	14-21	6.1-7.8	0	0	0	0
INT:							
Aquolls	0-72	---	---	---	---	---	---
IvC:							
Inavale	0-8	2.0-8.0	5.6-7.8	0	0	0	0
	8-21	2.0-7.0	5.6-7.8	0	0	0	0
	21-60	2.0-7.0	6.6-8.4	0-5	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Butler County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
IwC:							
Inavale	0-8	2.0-8.0	5.6-7.8	0	0	0	0
	8-21	2.0-7.0	5.6-7.8	0	0	0	0
	21-60	2.0-7.0	6.6-8.4	0-5	0	0	0
Boel	0-14	8.0-17	6.6-8.4	0-5	0	0	0
	14-60	0.0-4.0	6.6-8.4	0-5	0	0	0
JuC:							
Judson	0-20	25-30	5.6-7.3	0	0	0	0
	20-42	25-30	5.6-7.3	0	0	0	0
	42-60	25-30	6.1-7.8	0-15	0	0	0
Kz:							
Kezan	0-6	18-30	6.6-7.8	0	0	0	0
	6-13	15-25	6.6-7.8	0	0	0	0
	13-60	15-25	6.6-8.4	0-10	0	0	0
La:							
Lamo	0-12	18-28	7.4-8.4	1-5	0	0	0
	12-60	15-25	7.4-8.4	1-15	0	0	0
LoC2:							
Longford	0-7	15-30	5.6-7.3	0	0	0	0
	7-48	15-35	5.1-7.3	0	0	0	0
	48-60	10-30	6.1-7.8	0-5	0	0	0
LoD2:							
Longford	0-7	15-30	5.6-7.3	0	0	0	0
	7-48	15-35	5.1-7.3	0	0	0	0
	48-60	10-30	6.1-7.8	0-5	0	0	0
M-W:							
Miscellaneous Water	---	---	---	---	---	---	---
MnC:							
Monona	0-13	25-30	5.6-7.3	0	0	0	0
	13-42	25-30	6.1-7.3	0	0	0	0
	42-60	20-25	6.6-8.4	0-25	0	0	0
MnD2:							
Pohocco	0-13	15-25	6.6-7.8	0	0	0	0
	13-42	15-30	6.6-7.8	0	0	0	0
	42-60	15-20	6.6-7.8	0-5	0	0	0
MnE:							
Monona	0-13	25-30	5.6-7.3	0	0	0	0
	13-42	25-30	6.1-7.3	0	0	0	0
	42-60	20-25	6.6-8.4	0-25	0	0	0
MnF:							
Monona	0-13	25-30	5.6-7.3	0	0	0	0
	13-42	25-30	6.1-7.3	0	0	0	0
	42-60	20-25	6.6-8.4	0-25	0	0	0
Mu:							
Muir	0-20	10-25	5.6-7.3	---	---	---	---
	20-36	10-25	6.1-7.3	---	---	---	---
	36-60	10-25	6.1-8.4	---	---	---	---
MuB:							
Muir	0-20	10-25	5.6-7.3	---	---	---	---
	20-36	10-25	6.1-7.3	---	---	---	---
	36-60	10-25	6.1-8.4	---	---	---	---
Ob:							
Olbut	0-6	15-22	6.1-7.8	0-1	0	2.0-4.0	0-10
	6-20	29-42	6.1-8.4	0-10	0	4.0-8.0	0-10
	20-29	14-29	7.4-8.4	1-10	0	4.0-8.0	5-10
	29-80	14-18	7.9-9.0	5-15	0	2.0-4.0	5-20
Butler	0-14	18-27	5.1-6.5	0	0	0	0
	14-35	30-40	5.6-7.8	0	0	0	0
	35-40	20-35	6.6-8.4	0-5	0	0	0
	40-60	10-30	6.6-8.4	0-5	0	0	0
OvB:							
Ovina	0-16	3.0-9.0	6.6-8.4	0-10	0	0	0
	16-21	7.0-15	6.6-8.4	0-10	0	0	0
	21-60	4.0-12	7.4-8.4	1-10	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Butler County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
OxC:							
Ovina----------	0-16	3.0-9.0	6.6-8.4	0-10	0	0	0
	16-21	7.0-15	6.6-8.4	0-10	0	0	0
	21-60	4.0-12	7.4-8.4	1-10	0	0	0
Thurman----------	0-10	4.0-10	5.6-7.3	0	0	0	0
	10-16	1.0-10	5.6-7.3	0	0	0	0
	16-60	1.0-6.0	5.6-7.3	0	0	0	0
PaC2:							
Pawnee----------	0-9	20-35	5.6-7.3	0	0	0	0
	9-38	25-40	5.6-7.3	0	0	0	0
	38-60	15-30	7.4-8.4	1-10	0	0	0
PaD2:							
Pawnee----------	0-9	20-35	5.6-7.3	0	0	0	0
	9-38	25-40	5.6-7.3	0	0	0	0
	38-60	15-30	7.4-8.4	1-10	0	0	0
PoC2:							
Pohocco----------	0-7	20-35	6.6-7.8	0	0	0	0
	7-27	15-30	6.6-7.8	0	0	0	0
	27-60	15-20	6.6-7.8	0-5	0	0	0
PoD2:							
Pohocco----------	0-7	20-35	6.6-7.8	0	0	0	0
	7-27	15-30	6.6-7.8	0	0	0	0
	27-60	15-20	6.6-7.8	0-5	0	0	0
PoE2:							
Pohocco----------	0-7	20-35	6.6-7.8	0	0	0	0
	7-27	15-30	6.6-7.8	0	0	0	0
	27-60	15-20	6.6-7.8	0-5	0	0	0
PsD2:							
Pohocco----------	0-7	20-35	6.6-7.8	0	0	0	0
	7-27	15-30	6.6-7.8	0	0	0	0
	27-60	15-20	6.6-7.8	0-5	0	0	0
Crofton----------	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-60	15-25	7.4-8.4	1-15	0	0	0
PsE2:							
Pohocco----------	0-7	20-35	6.6-7.8	0	0	0	0
	7-27	15-30	6.6-7.8	0	0	0	0
	27-60	15-20	6.6-7.8	0-5	0	0	0
Crofton----------	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-60	15-25	7.4-8.4	1-15	0	0	0
PsF2:							
Pohocco----------	0-7	20-35	6.6-7.8	0	0	0	0
	7-27	15-30	6.6-7.8	0	0	0	0
	27-60	15-20	6.6-7.8	0-5	0	0	0
Crofton----------	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-60	15-25	7.4-8.4	1-15	0	0	0
Sa:							
Saltine----------	0-9	10-20	7.4-9.6	1-10	0	0.0-8.0	0-50
	9-25	14-30	8.5-9.6	1-5	0	4.0-16.0	6-99
	25-60	14-30	7.4-9.6	1-5	0	0.0-4.0	0-99
Gibbon----------	0-14	16-22	7.4-8.4	0-5	0	0.0-2.0	0
	14-36	14-20	7.4-8.4	5-15	0	0.0-2.0	0-5
	36-60	10-18	7.9-8.4	5-15	0	0.0-2.0	0-5
Sc:							
Scott----------	0-10	20-30	5.1-6.5	0	0	0	0
	10-36	20-35	5.6-7.8	0	0	0	0
	36-49	20-35	6.6-8.4	0-5	0	0	0
	49-60	25-35	6.6-8.4	0-5	0	0	0
Sh:							
Aksarben--------	0-12	25-35	5.1-6.5	0	0	0	0
	12-46	25-35	5.1-6.5	0	0	0	0
	46-60	20-30	6.1-7.3	0	0	0	0
ShC:							
Aksarben--------	0-12	25-35	5.1-6.5	0	0	0	0
	12-46	25-35	5.1-6.5	0	0	0	0
	46-60	20-30	6.1-7.3	0	0	0	0
ShC2:							
Yutan----------	0-7	25-35	5.1-6.5	0	0	0	0
	7-36	25-35	5.6-7.3	0	0	0	0
	36-60	20-30	6.1-7.3	0	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Butler County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
ShD:							
Aksarben--------	0-12	25-35	5.1-6.5	0	0	0	0
	12-46	25-35	5.1-6.5	0	0	0	0
	46-60	20-30	6.1-7.3	0	0	0	0
ShD2:							
Yutan-----------	0-7	25-35	5.1-6.5	0	0	0	0
	7-28	25-35	5.6-7.3	0	0	0	0
	28-60	20-30	6.1-7.3	0	0	0	0
Sk:							
Silver Creek----	0-15	15-25	6.6-7.8	0-5	0	2.0-4.0	0-5
	15-23	25-40	7.4-8.4	1-15	0	2.0-8.0	0-5
	23-50	5.0-20	7.9-8.4	1-15	0	2.0-4.0	0-5
	50-60	2.0-10	7.9-8.4	1-15	0	2.0-4.0	0-5
SmB:							
Simeon----------	0-13	0.0-5.0	6.1-7.8	0	0	0	0
	13-60	0.0-5.0	6.1-7.8	0	0	0	0
StD2:							
Steinauer-------	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-18	15-25	7.4-8.4	5-15	0	0	0
	18-60	15-25	7.9-8.4	5-20	0	0	0
StF:							
Steinauer-------	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-18	15-25	7.4-8.4	5-15	0	0	0
	18-60	15-25	7.9-8.4	5-20	0	0	0
StG:							
Steinauer-------	0-6	15-25	7.4-8.4	1-10	0	0	0
	6-18	15-25	7.4-8.4	5-15	0	0	0
	18-60	15-25	7.9-8.4	5-20	0	0	0
ThC:							
Thurman---------	0-10	4.0-10	5.6-7.3	0	0	0	0
	10-16	1.0-10	5.6-7.3	0	0	0	0
	16-60	1.0-6.0	5.6-7.3	0	0	0	0
TkD:							
Thurman---------	0-10	4.0-10	5.6-7.3	0	0	0	0
	10-16	1.0-10	5.6-7.3	0	0	0	0
	16-60	1.0-6.0	5.6-7.3	0	0	0	0
Monona Variant--	0-13	6.0-15	5.6-7.3	0	0	0	0
	13-60	14-20	6.1-7.3	0	0	0	0
UaF2:							
Uly-------------	0-8	10-20	6.1-7.8	0	0	0	0
	8-23	14-25	6.1-7.8	0	0	0	0
	23-60	12-20	7.4-8.4	1-15	0	0	0
UbF:							
Uly-------------	0-8	10-20	6.1-7.8	0	0	0	0
	8-23	14-25	6.1-7.8	0	0	0	0
	23-60	12-20	7.4-8.4	1-15	0	0	0
Coly------------	0-4	14-19	7.4-8.4	1-5	0	0	0
	4-60	13-18	7.4-8.4	5-10	0	0	0
UcF2:							
Uly-------------	0-8	10-20	6.1-7.8	0	0	0	0
	8-23	14-25	6.1-7.8	0	0	0	0
	23-60	12-20	7.4-8.4	1-15	0	0	0
Coly------------	0-4	14-19	7.4-8.4	1-5	0	0	0
	4-60	13-18	7.4-8.4	5-10	0	0	0
UhF2:							
Uly-------------	0-8	10-20	6.1-7.8	0	0	0	0
	8-23	14-25	6.1-7.8	0	0	0	0
	23-60	12-20	7.4-8.4	1-15	0	0	0
Hobbs-----------	0-7	15-30	6.1-7.8	0	0	0	0
	7-25	10-20	6.1-7.8	0	0	0	0
	25-60	20-40	6.6-8.4	0-5	0	0	0
UkC2:							
Uly Variant-----	0-6	20-30	7.4-7.8	0	0	2.0-4.0	0-13
	6-15	25-30	7.4-8.4	0-15	0	4.0-8.0	0-13
	15-80	12-20	7.4-8.4	1-15	0	2.0-4.0	0-13
W:							
Water-----------	---	---	---	---	---	---	---
WoB:							
Wood River------	0-9	10-25	6.6-7.8	0-5	0	0.0-4.0	0-13
	9-33	25-35	7.4-9.6	1-15	0	4.0-8.0	13-99
	33-60	10-25	7.4-9.6	1-15	0	4.0-8.0	13-99

CHEMICAL PROPERTIES OF THE SOILS--Continued
Butler County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
Zk:							
Zook----------	0-13	20-25	5.6-7.3	0	0	0	0
	13-60	36-41	5.6-7.8	0	0	0	0
Zo:							
Zook----------	0-6	36-41	5.6-7.3	0	0	0	0
	6-60	36-41	5.6-7.8	0	0	0	0

WATER FEATURES
Butler County, Nebraska

The Water Features table gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The months in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The Water Features table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The Water Features table indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

WATER FEATURES--Continued
Butler County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Af:									
Alda	C								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	---	None
		April	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
Ba:									
Barney	D								
		January	0.0-2.0	>6.0	---	---	---	---	None
		February	0.0-2.0	>6.0	---	---	---	---	None
		March	0.0-2.0	>6.0	---	---	---	Brief	Frequent
		April	0.0-2.0	>6.0	---	---	---	Brief	Frequent
		May	0.0-2.0	>6.0	---	---	---	Brief	Frequent
		June	0.0-2.0	>6.0	---	---	---	Brief	Frequent
		November	0.0-2.0	>6.0	---	---	---	---	None
		December	0.0-2.0	>6.0	---	---	---	---	None
Bd:									
Blendon	B		---	---	---	---	---	---	---
BdC:									
Blendon	B		---	---	---	---	---	---	---
Bf:									
Blendon	B		---	---	---	---	---	---	---
Muir	B								
		January	3.0-6.0	>6.0	---	---	---	---	None
		February	3.0-6.0	>6.0	---	---	---	---	None
		March	---	---	---	---	---	Brief	Rare
		April	---	---	---	---	---	Brief	Rare
		May	---	---	---	---	---	Brief	Rare
		June	---	---	---	---	---	Brief	Rare
		July	---	---	---	---	---	Brief	Rare
		August	---	---	---	---	---	Brief	Rare
		September	---	---	---	---	---	Brief	Rare
		October	---	---	---	---	---	Brief	Rare
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	---	None
Bh:									
Boel	A								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		April	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
Bn:									
Boel	A								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		April	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
Alda	C								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	---	None
		April	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
Br:									
Brocksburg	B		---	---	---	---	---	---	---
BsD:									
Burchard	B		---	---	---	---	---	---	---
BsE:									
Burchard	B		---	---	---	---	---	---	---
BtE2:									
Burchard	B								

WATER FEATURES--Continued
Butler County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
			---	---	---	---	---	---	---
Steinauer----------	B								
			---	---	---	---	---	---	---
Bu:									
Butler----------	D								
		March	0.5-2.0	0.5-1.5	---	---	---	---	None
		April	0.5-2.0	0.5-1.5	---	---	---	---	None
		May	0.5-2.0	0.5-1.5	---	---	---	---	None
		June	0.5-2.0	0.5-1.5	---	---	---	---	None
		July	0.5-2.0	0.5-1.5	---	---	---	---	None
CfG:									
Coly----------	B								
			---	---	---	---	---	---	---
CoB:									
Cozad----------	B								
			---	---	---	---	---	---	---
CrD2:									
Crofton----------	B								
			---	---	---	---	---	---	---
CrE2:									
Crofton----------	B								
			---	---	---	---	---	---	---
CrF2:									
Crofton----------	B								
			---	---	---	---	---	---	---
CrG:									
Crofton----------	B								
			---	---	---	---	---	---	---
Fm:									
Fillmore----------	D								
		March	0.0	>6.0	0.0-0.5	Brief	Occasional	---	None
		April	0.0	>6.0	0.0-0.5	Brief	Occasional	---	None
		May	0.0	>6.0	0.0-0.5	Brief	Occasional	---	None
		June	0.0	>6.0	0.0-0.5	Brief	Occasional	---	None
		July	0.0	>6.0	0.0-0.5	Brief	Occasional	---	None
Gb:									
Gibbon----------	B								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	Very brief	Occasional
		April	1.5-3.0	>6.0	---	---	---	Very brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Very brief	Occasional
		June	1.5-3.0	>6.0	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
GP:									
Pits----------	A								
			---	---	---	---	---	---	---
Gr:									
Grigston----------	B								
		January	3.0-6.0	>6.0	---	---	---	---	None
		February	3.0-6.0	>6.0	---	---	---	---	None
		March	---	---	---	---	---	Brief	Rare
		April	---	---	---	---	---	Brief	Rare
		May	---	---	---	---	---	Brief	Rare
		June	---	---	---	---	---	Brief	Rare
		July	---	---	---	---	---	Brief	Rare
		August	---	---	---	---	---	Brief	Rare
		September	---	---	---	---	---	Brief	Rare
		October	---	---	---	---	---	Brief	Rare
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	---	None
Ha:									
Hall----------	B								
			---	---	---	---	---	---	---
Hc:									
Hastings----------	B								
			---	---	---	---	---	---	---
HcB:									
Hastings----------	B								
			---	---	---	---	---	---	---
HcC:									
Hastings----------	B								
			---	---	---	---	---	---	---
HcD:									
Hastings----------	B								
			---	---	---	---	---	---	---
HdC2:									
Hastings----------	B								
			---	---	---	---	---	---	---
HdD2:									
Hastings----------	B								
			---	---	---	---	---	---	---

WATER FEATURES--Continued
Butler County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Hg:									
Hobbs	B								
		April	---	---	---	---	---	Brief	Occasional
		May	---	---	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		August	---	---	---	---	---	Brief	Occasional
		September	---	---	---	---	---	Brief	Occasional
HhB:									
Hobbs	B								
		April	---	---	---	---	---	Brief	Frequent
		May	---	---	---	---	---	Brief	Frequent
		June	---	---	---	---	---	Brief	Frequent
		July	---	---	---	---	---	Brief	Frequent
		August	---	---	---	---	---	Brief	Frequent
		September	---	---	---	---	---	Brief	Frequent
HkB:									
Holder	B								
			---	---	---	---	---	---	---
INT:									
Aquolls	C								
		March	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		April	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		May	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		June	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
IvC:									
Inavale	A								
		January	3.0-6.0	>6.0	---	---	---	---	None
		February	3.0-6.0	>6.0	---	---	---	---	None
		March	---	---	---	---	---	Brief	Rare
		April	---	---	---	---	---	Brief	Rare
		May	---	---	---	---	---	Brief	Rare
		June	---	---	---	---	---	Brief	Rare
		July	---	---	---	---	---	Brief	Rare
		August	---	---	---	---	---	Brief	Rare
		September	---	---	---	---	---	Brief	Rare
		October	---	---	---	---	---	Brief	Rare
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	---	None
IwC:									
Inavale	A								
		January	---	---	---	---	---	Very brief	Occasional
		February	---	---	---	---	---	Very brief	Occasional
		March	---	---	---	---	---	Very brief	Occasional
		April	---	---	---	---	---	Very brief	Occasional
		May	---	---	---	---	---	Very brief	Occasional
		June	---	---	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
Boel	A								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		April	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
JuC:									
Judson	B								
			---	---	---	---	---	---	---
Kz:									
Kezan	D								
		January	1.0-3.0	>6.0	---	---	---	---	None
		February	1.0-3.0	>6.0	---	---	---	---	None
		March	1.0-3.0	>6.0	---	---	---	Brief	Frequent
		April	1.0-3.0	>6.0	---	---	---	Brief	Frequent
		May	1.0-3.0	>6.0	---	---	---	Brief	Frequent
		June	1.0-3.0	>6.0	---	---	---	Brief	Frequent
		July	---	---	---	---	---	Brief	Frequent
		November	1.0-3.0	>6.0	---	---	---	---	None
		December	1.0-3.0	>6.0	---	---	---	---	None
La:									
Lamo	C								
		January	1.0-3.0	>6.0	---	---	---	---	None
		February	1.0-3.0	>6.0	---	---	---	---	None
		March	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		April	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		August	---	---	---	---	---	Brief	Occasional
		November	1.0-3.0	>6.0	---	---	---	---	None
		December	1.0-3.0	>6.0	---	---	---	---	None
LoC2:									

WATER FEATURES--Continued
Butler County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Longford	C		---	---	---	---	---	---	---
LoD2:									
Longford	C		---	---	---	---	---	---	---
MnC:									
Monona	B		---	---	---	---	---	---	---
MnD2:									
Pohocco	B		---	---	---	---	---	---	---
MnE:									
Monona	B		---	---	---	---	---	---	---
MnF:									
Monona	B		---	---	---	---	---	---	---
Mu:									
Muir	B								
		January	3.0-6.0	>6.0	---	---	---	---	None
		February	3.0-6.0	>6.0	---	---	---	---	None
		March	---	---	---	---	---	Brief	Rare
		April	---	---	---	---	---	Brief	Rare
		May	---	---	---	---	---	Brief	Rare
		June	---	---	---	---	---	Brief	Rare
		July	---	---	---	---	---	Brief	Rare
		August	---	---	---	---	---	Brief	Rare
		September	---	---	---	---	---	Brief	Rare
		October	---	---	---	---	---	Brief	Rare
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	---	None
MuB:									
Muir	B								
		January	3.0-6.0	>6.0	---	---	---	---	None
		February	3.0-6.0	>6.0	---	---	---	---	None
		March	---	---	---	---	---	Brief	Rare
		April	---	---	---	---	---	Brief	Rare
		May	---	---	---	---	---	Brief	Rare
		June	---	---	---	---	---	Brief	Rare
		July	---	---	---	---	---	Brief	Rare
		August	---	---	---	---	---	Brief	Rare
		September	---	---	---	---	---	Brief	Rare
		October	---	---	---	---	---	Brief	Rare
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	---	None
Ob:									
Olbut	D								
		January	0.0-2.0	0.5-1.5	---	---	---	---	None
		February	0.0-2.0	0.5-1.5	---	---	---	---	None
		March	0.0-2.0	0.5-1.5	---	---	---	---	None
		April	0.0-2.0	0.5-1.5	---	---	---	---	None
		May	0.0-2.0	0.5-1.5	---	---	---	---	None
		December	0.0-2.0	0.5-1.5	---	---	---	---	None
Butler	D								
		March	0.5-2.0	0.5-1.5	---	---	---	---	None
		April	0.5-2.0	0.5-1.5	---	---	---	---	None
		May	0.5-2.0	0.5-1.5	---	---	---	---	None
		June	0.5-2.0	0.5-1.5	---	---	---	---	None
		July	0.5-2.0	0.5-1.5	---	---	---	---	None
OvB:									
Ovina	B								
		May	1.0-3.0	>6.0	---	---	---	---	None
		June	1.0-3.0	>6.0	---	---	---	---	None
		July	1.0-3.0	>6.0	---	---	---	---	None
		August	1.0-3.0	>6.0	---	---	---	---	None
		September	1.0-3.0	>6.0	---	---	---	---	None
		October	1.0-3.0	>6.0	---	---	---	---	None
		November	1.0-3.0	>6.0	---	---	---	---	None
OxC:									
Ovina	B								
		May	1.0-3.0	>6.0	---	---	---	---	None
		June	1.0-3.0	>6.0	---	---	---	---	None
		July	1.0-3.0	>6.0	---	---	---	---	None
		August	1.0-3.0	>6.0	---	---	---	---	None
		September	1.0-3.0	>6.0	---	---	---	---	None
		October	1.0-3.0	>6.0	---	---	---	---	None
		November	1.0-3.0	>6.0	---	---	---	---	None
Thurman	A		---	---	---	---	---	---	---
PaC2:									
Pawnee	D								
		March	1.0-3.0	1.0-3.0	---	---	---	---	None
		April	1.0-3.0	1.0-3.0	---	---	---	---	None
		May	1.0-3.0	1.0-3.0	---	---	---	---	None

WATER FEATURES--Continued
Butler County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
PaD2:									
Pawnee	D								
		March	1.0-3.0	1.0-3.0	---	---	---	---	None
		April	1.0-3.0	1.0-3.0	---	---	---	---	None
		May	1.0-3.0	1.0-3.0	---	---	---	---	None
PoC2:									
Pohocco	B		---	---	---	---	---	---	---
PoD2:									
Pohocco	B		---	---	---	---	---	---	---
PoE2:									
Pohocco	B		---	---	---	---	---	---	---
PsD2:									
Pohocco	B		---	---	---	---	---	---	---
Crofton	B		---	---	---	---	---	---	---
PsE2:									
Pohocco	B		---	---	---	---	---	---	---
Crofton	B		---	---	---	---	---	---	---
PsF2:									
Pohocco	B		---	---	---	---	---	---	---
Crofton	B		---	---	---	---	---	---	---
Sa:									
Saltine	C								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	---	None
		April	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		June	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		July	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
Gibbon	B								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	Very brief	Occasional
		April	1.5-3.0	>6.0	---	---	---	Very brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Very brief	Occasional
		June	1.5-3.0	>6.0	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
Sc:									
Scott	D								
		March	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		April	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		May	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		June	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
		July	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
Sh:									
Aksarben	B		---	---	---	---	---	---	---
ShC:									
Aksarben	B		---	---	---	---	---	---	---
ShC2:									
Yutan	B		---	---	---	---	---	---	---
ShD:									
Aksarben	B		---	---	---	---	---	---	---
ShD2:									
Yutan	B		---	---	---	---	---	---	---
Sk:									

WATER FEATURES--Continued
Butler County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Silver Creek----------	D								
		January	3.0-6.0	>6.0	---	---	---	---	None
		February	3.0-6.0	>6.0	---	---	---	---	None
		March	---	---	---	---	---	Brief	Rare
		April	---	---	---	---	---	Brief	Rare
		May	---	---	---	---	---	Brief	Rare
		June	---	---	---	---	---	Brief	Rare
		July	---	---	---	---	---	Brief	Rare
		August	---	---	---	---	---	Brief	Rare
		September	---	---	---	---	---	Brief	Rare
		October	---	---	---	---	---	Brief	Rare
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	---	None
SmB:									
Simeon----------	A		---	---	---	---	---	---	---
StD2:									
Steinauer----------	B		---	---	---	---	---	---	---
StF:									
Steinauer----------	B		---	---	---	---	---	---	---
StG:									
Steinauer----------	B		---	---	---	---	---	---	---
ThC:									
Thurman----------	A		---	---	---	---	---	---	---
TkD:									
Thurman----------	A		---	---	---	---	---	---	---
Monona Variant----------	B		---	---	---	---	---	---	---
UaF2:									
Uly----------	B		---	---	---	---	---	---	---
UbF:									
Uly----------	B		---	---	---	---	---	---	---
Coly----------	B		---	---	---	---	---	---	---
UcF2:									
Coly----------	B		---	---	---	---	---	---	---
Uly----------	B		---	---	---	---	---	---	---
UhF2:									
Uly----------	B		---	---	---	---	---	---	---
Hobbs----------	B								
		April	---	---	---	---	---	Brief	Occasional
		May	---	---	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
		July	---	---	---	---	---	Brief	Occasional
		August	---	---	---	---	---	Brief	Occasional
		September	---	---	---	---	---	Brief	Occasional
UkC2:									
Uly Variant----------	C		---	---	---	---	---	---	---
W:									
Water----------	---		---	---	---	---	---	---	---
WoB:									
Wood River----------	D		---	---	---	---	---	---	---
Zk:									
Zook----------	C/D								
		January	0.0-1.0	>6.0	---	---	---	---	None
		February	0.0-1.0	>6.0	---	---	---	Long	Occasional
		March	0.0-1.0	>6.0	---	---	---	Long	Occasional
		April	0.0-1.0	>6.0	---	---	---	Long	Occasional
		May	0.0-1.0	>6.0	---	---	---	Long	Occasional
		June	0.0-1.0	>6.0	---	---	---	Long	Occasional
		July	0.0-1.0	>6.0	---	---	---	Long	Occasional
		August	---	---	---	---	---	Long	Occasional
		September	---	---	---	---	---	Long	Occasional
		October	---	---	---	---	---	Long	Occasional
		November	0.0-1.0	>6.0	---	---	---	Long	Occasional
		December	0.0-1.0	>6.0	---	---	---	---	None
Zo:									

WATER FEATURES--Continued
Butler County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Zook----------	C/D								
		January	0.0-1.0	>6.0	---	---	---	---	None
		February	0.0-1.0	>6.0	---	---	---	Long	Occasional
		March	0.0-1.0	>6.0	---	---	---	Long	Occasional
		April	0.0-1.0	>6.0	---	---	---	Long	Occasional
		May	0.0-1.0	>6.0	---	---	---	Long	Occasional
		June	0.0-1.0	>6.0	---	---	---	Long	Occasional
		July	0.0-1.0	>6.0	---	---	---	Long	Occasional
		August	---	---	---	---	---	Long	Occasional
		September	---	---	---	---	---	Long	Occasional
		October	---	---	---	---	---	Long	Occasional
		November	0.0-1.0	>6.0	---	---	---	Long	Occasional
		December	0.0-1.0	>6.0	---	---	---	---	None

SOIL FEATURES
Butler County, Nebraska

The following table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as low, moderate, or high, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as low, moderate, or high. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

SOIL FEATURES--Continued
Butler County, Nebraska

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
AED:							
Arents, Earthen Dam----------	---	---	---	---	---	---	---
Af:							
Alda----------	---	---	---	---	High	Moderate	Low
Ba:							
Barney----------	---	---	---	---	Moderate	High	Low
Bd:							
Blendon---------	---	---	---	---	Moderate	Moderate	Low
BdC:							
Blendon---------	---	---	---	---	Moderate	Moderate	Low
Bf:							
Blendon---------	---	---	---	---	Moderate	Moderate	Low
Muir----------	---	---	---	---	Moderate	Low	Moderate
Bh:							
Boel----------	---	---	---	---	Moderate	High	Low
Bn:							
Boel----------	---	---	---	---	Moderate	High	Low
Alda----------	---	---	---	---	High	Moderate	Low
Br:							
Brocksburg------	---	---	---	---	Moderate	Low	Low
BsD:							
Burchard--------	---	---	---	---	Moderate	Moderate	Low
BsE:							
Burchard--------	---	---	---	---	Moderate	Moderate	Low
BtE2:							
Burchard--------	---	---	---	---	Moderate	Moderate	Low
Steinauer-------	---	---	---	---	Moderate	High	Low
Bu:							
Butler----------	---	---	---	---	High	High	Low
CfG:							
Coly----------	---	---	---	---	Moderate	High	Low
CoB:							
Cozad----------	---	---	---	---	Moderate	Low	Low
CrD2:							
Crofton---------	---	---	---	---	Moderate	Low	Low
CrE2:							
Crofton---------	---	---	---	---	Moderate	Low	Low
CrF2:							
Crofton---------	---	---	---	---	Moderate	Low	Low
CrG:							
Crofton---------	---	---	---	---	Moderate	Low	Low
Fm:							
Fillmore--------	---	---	---	---	High	High	Low
Gb:							
Gibbon----------	---	---	---	---	High	High	Low
GP:							
Pits----------	---	---	---	---	Low	Low	Low
Gr:							
Grigston--------	---	---	---	---	Moderate	Low	Low
Ha:							
Hall----------	---	---	---	---	Moderate	Moderate	Low
Hc:							
Hastings--------	---	---	---	---	Moderate	Moderate	Low
HcB:							
Hastings--------	---	---	---	---	Moderate	Moderate	Low
HcC:							
Hastings--------	---	---	---	---	Moderate	Moderate	Low
HcD:							
Hastings--------	---	---	---	---	Moderate	Moderate	Low
HdC2:							
Hastings--------	---	---	---	---	Moderate	Moderate	Low
HdD2:							
Hastings--------	---	---	---	---	Moderate	Moderate	Low
Hg:							
Hobbs----------	---	---	---	---	Moderate	Low	Low
HhB:							
Hobbs----------	---	---	---	---	Moderate	Low	Low
HkB:							
Holder----------	---	---	---	---	High	Low	Low
INT:							
Aquolls---------	---	---	---	---	Low	---	---
IvC:							
Inavale---------	---	---	---	---	Low	Moderate	Low
IwC:							
Inavale---------	---	---	---	---	Low	Moderate	Low
Boel----------	---	---	---	---	Moderate	High	Low
JuC:							
Judson----------	---	---	---	---	High	Moderate	Low
Kz:							
Kezan----------	---	---	---	---	High	High	Low
La:							
Lamo----------	---	---	---	---	High	High	Low
LoC2:							
Longford--------	---	---	---	---	Moderate	High	Low
LoD2:							
Longford--------	---	---	---	---	Moderate	High	Low

SOIL FEATURES--Continued
Butler County, Nebraska

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
M-W:							
Miscellaneous Water----------	---	---	---	---	---	---	---
MnC:							
Monona----------	---	---	---	---	High	Low	Low
MnD2:							
Pohocco----------	---	---	---	---	High	Moderate	Low
MnE:							
Monona----------	---	---	---	---	High	Low	Low
MnF:							
Monona----------	---	---	---	---	High	Low	Low
Mu:							
Muir------------	---	---	---	---	Moderate	Low	Moderate
MuB:							
Muir------------	---	---	---	---	Moderate	Low	Moderate
Ob:							
Olbut-----------	---	---	---	---	High	High	High
Butler----------	---	---	---	---	High	High	Low
OvB:							
Ovina-----------	---	---	---	---	High	Moderate	Low
OxC:							
Ovina-----------	---	---	---	---	High	Moderate	Low
Thurman---------	---	---	---	---	Low	Low	Low
PaC2:							
Pawnee----------	---	---	---	---	High	High	Low
PaD2:							
Pawnee----------	---	---	---	---	High	High	Low
PoC2:							
Pohocco---------	---	---	---	---	High	Moderate	Low
PoD2:							
Pohocco---------	---	---	---	---	High	Moderate	Low
PoE2:							
Pohocco---------	---	---	---	---	High	Moderate	Low
PsD2:							
Pohocco---------	---	---	---	---	High	Moderate	Low
Crofton---------	---	---	---	---	Moderate	Low	Low
PsE2:							
Pohocco---------	---	---	---	---	High	Moderate	Low
Crofton---------	---	---	---	---	Moderate	Low	Low
PsF2:							
Pohocco---------	---	---	---	---	High	Moderate	Low
Crofton---------	---	---	---	---	Moderate	Low	Low
Sa:							
Saltine---------	---	---	---	---	High	High	High
Gibbon----------	---	---	---	---	High	High	Low
Sc:							
Scott-----------	---	---	---	---	High	High	Low
Sh:							
Aksarben--------	---	---	---	---	High	Moderate	Moderate
ShC:							
Aksarben--------	---	---	---	---	High	Moderate	Moderate
ShC2:							
Yutan-----------	---	---	---	---	High	Moderate	Moderate
ShD:							
Aksarben--------	---	---	---	---	High	Moderate	Moderate
ShD2:							
Yutan-----------	---	---	---	---	High	Moderate	Moderate
Sk:							
Silver Creek----	---	---	---	---	High	High	Low
SmB:							
Simeon----------	---	---	---	---	Low	Low	Low
StD2:							
Steinauer-------	---	---	---	---	Moderate	High	Low
StF:							
Steinauer-------	---	---	---	---	Moderate	High	Low
StG:							
Steinauer-------	---	---	---	---	Moderate	High	Low
ThC:							
Thurman---------	---	---	---	---	Low	Low	Low
TkD:							
Thurman---------	---	---	---	---	Low	Low	Low
Monona Variant--	---	---	---	---	High	Low	Low
UaF2:							
Uly-------------	---	---	---	---	Moderate	High	Low
UbF:							
Uly-------------	---	---	---	---	Moderate	High	Low
Coly------------	---	---	---	---	Moderate	High	Low
UcF2:							
Coly------------	---	---	---	---	Moderate	High	Low
Uly-------------	---	---	---	---	Moderate	High	Low
UhF2:							
Uly-------------	---	---	---	---	Moderate	High	Low
Hobbs-----------	---	---	---	---	Moderate	Low	Low
UkC2:							
Uly Variant-----	---	---	---	---	Moderate	High	High
W:							
Water-----------	---	---	---	---	---	---	---

SOIL FEATURES--Continued
Butler County, Nebraska

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
WoB:							
Wood River------	---	---	---	---	Low	High	High
Zk:							
Zook------------	---	---	---	---	High	High	Moderate
Zo:							
Zook------------	---	---	---	---	High	High	Moderate

WATER MANAGEMENT
Butler County, Nebraska

The soils of the survey area are rated in the Water Management table according to limitations that affect their suitability for water management. Soils are rated for pond reservoir areas, drainage, irrigation, terraces and diversions, and grassed waterways. Restrictive features that affect each soil for the specified use is also provided in the table.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Moderately limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Limited indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but generally require special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate to high maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Limitation class terms, such as very limited or limited, etc., limitation ratings, and numerical ratings are shown for each soil feature listed. As many as three soil features may be listed for each soil component if applicable. The overall limitation rating for the soil component is based on the most severe limitation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorablecompaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects theamount of usable material. It also affects traffic ability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditch banks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a very limited hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, which conduct surface water to outlets at a non-erosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
AED:				
Arents, Earthen Dam	---	---	---	---
Af:				
Alda	Limitation: flooding frost action cutbanks cave	Limitation: flooding wetness soil blowing	Limitation: too sandy wetness soil blowing	Favorable
Ba:				
Barney	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: rooting depth wetness droughty
Bd:				
Blendon	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
BdC:				
Blendon	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
Bf:				
Blendon	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
Muir	Limitation: deep to water	Favorable	Favorable	Favorable
Bh:				
Boel	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: rooting depth droughty
Bn:				
Boel	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: rooting depth droughty
Alda	Limitation: flooding frost action cutbanks cave	Limitation: flooding wetness soil blowing	Limitation: too sandy wetness soil blowing	Favorable
Br:				
Brocksburg	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
BsD:				
Burchard	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
BsE:				
Burchard	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
BtE2:				
Burchard	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Steinauer	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Bu:				
Butler	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily percs slowly wetness
CfG:				
Coly	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
CoB:				
Cozad	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
CrD2:				
Crofton	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
CrE2:				
Crofton	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
CrF2:				
Crofton	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
CrG:				
Crofton	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Fm:				
Fillmore	Limitation: frost action percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly wetness
Gb:				
Gibbon	Limitation: flooding frost action	Limitation: flooding wetness	Limitation: wetness	Favorable
GP:				
Pits	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy	Limitation: rooting depth slope droughty
Gr:				
Grigston	Limitation: deep to water	Favorable	Favorable	Favorable
Ha:				
Hall	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
Hc:				
Hastings	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
HcB:				
Hastings	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
HcC:				
Hastings	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
HcD:				
Hastings	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
HdC2:				
Hastings	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily
HdD2:				
Hastings	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Hg:				
Hobbs	Limitation: deep to water	Limitation: flooding	Limitation: erodes easily	Limitation: erodes easily
HhB:				
Hobbs	Limitation: deep to water	Limitation: flooding	Limitation: erodes easily	Limitation: erodes easily
HkB:				
Holder	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
INT:				
Aquolls	---	---	---	---
IvC:				
Inavale	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
IwC:				
Inavale	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Boel	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: rooting depth droughty
JuC:				
Judson	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
Kz:				
Kezan	Limitation: flooding frost action	Limitation: flooding wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
La:				
Lamo	Limitation: flooding frost action	Limitation: flooding wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
LoC2:				
Longford	Limitation: deep to water	Limitation: percs slowly slope	Limitation: percs slowly	Limitation: percs slowly
LoD2:				
Longford	Limitation: deep to water	Limitation: percs slowly slope	Limitation: percs slowly slope	Limitation: percs slowly slope

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
M-W: Miscellaneous Water	---	---	---	---
MnC: Monona	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
MnD2: Pohocco	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
MnE: Monona	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
MnF: Monona	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Mu: Muir	Limitation: deep to water	Favorable	Favorable	Favorable
MuB: Muir	Limitation: deep to water	Favorable	Favorable	Favorable
Ob: Olbut	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily percs slowly wetness
Butler	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily percs slowly wetness
OvB: Ovina	Limitation: frost action	Limitation: fast intake wetness	Limitation: wetness soil blowing	Limitation: wetness
OxC: Ovina	Limitation: frost action	Limitation: fast intake wetness	Limitation: wetness soil blowing	Limitation: wetness
Thurman	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: rooting depth droughty
PaC2: Pawnee	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: erodes easily wetness	Limitation: erodes easily wetness
PaD2: Pawnee	Limitation: frost action percs slowly slope	Limitation: slope wetness droughty	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness
PoC2: Pohocco	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily
PoD2: Pohocco	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
PoE2: Pohocco	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
PsD2: Pohocco	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Crofton	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
PsE2: Pohocco	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Crofton	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
PsF2: Pohocco	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Crofton	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Sa:				
Saltine	Limitation: excess salt flooding frost action	Limitation: erodes easily flooding wetness	Limitation: erodes easily wetness	Limitation: erodes easily excess sodium excess salt
Gibbon	Limitation: flooding frost action	Limitation: flooding wetness	Limitation: wetness	Favorable
Sc:				
Scott	Limitation: frost action percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly wetness
Sh:				
Aksarben	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
ShC:				
Aksarben	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
ShC2:				
Yutan	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily
ShD:				
Aksarben	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
ShD2:				
Yutan	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Sk:				
Silver Creek	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily excess sodium percs slowly
SmB:				
Simeon	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
StD2:				
Steinauer	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
StF:				
Steinauer	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
StG:				
Steinauer	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
ThC:				
Thurman	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: rooting depth droughty
TkD:				
Thurman	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: rooting depth slope droughty
Monona Variant	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily slope soil blowing	Limitation: erodes easily slope
UaF2:				
Uly	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
UbF:				
Uly	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Coly	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
UcF2:				
Coly	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Uly	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
UhF2:				
Uly	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Hobbs	Limitation: deep to water	Limitation: flooding	Limitation: erodes easily	Limitation: erodes easily
UkC2:				
Uly Variant	Limitation: deep to water	Limitation: erodes easily excess salt slope	Limitation: erodes easily	Limitation: erodes easily
W:				
Water	---	---	---	---
WoB:				
Wood River	Limitation: deep to water	Limitation: excess sodium percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily excess sodium percs slowly
Zk:				
Zook	Limitation: flooding frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Zo:				
Zook	Limitation: flooding frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AED:							
Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Af:							
Alda	100	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Cutbanks cave	1.00
				Depth to saturated zone	0.95	Deep to water	0.02
				Piping	0.02		
Ba:							
Barney	100	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Cutbanks cave	1.00
				Depth to saturated zone	1.00		
Bd:							
Blendon	100	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
BdC:							
Blendon	100	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
Bf:							
Blendon	60	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
Muir	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Piping	0.60	Deep to water	0.96
						Slow refill	0.30
						Cutbanks cave	0.10
Bh:							
Boel	100	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Cutbanks cave	1.00
				Depth to saturated zone	0.95	Deep to water	0.02
Bn:							
Boel	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Cutbanks cave	1.00
				Depth to saturated zone	0.95	Deep to water	0.02
Alda	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Cutbanks cave	1.00
				Depth to saturated zone	0.95	Deep to water	0.02
				Piping	0.02		
Br:							
Brocksburg	100	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
BsD:							
Burchard	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.05			Deep to water	1.00
BsE:							
Burchard	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.05			Deep to water	1.00
		Slope	0.01				
BtE2:							
Burchard	50	Somewhat limited		Not limited		Very limited	
		Seepage	0.05			Deep to water	1.00
		Slope	0.01				
Steinauer	50	Somewhat limited		Not limited		Very limited	
		Seepage	0.05			Deep to water	1.00
		Slope	0.01				
Bu:							
Butler	100	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Cutbanks cave	0.10
CfG:							
Coly	100	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Deep to water	1.00
		Seepage	0.70				
CoB:							
Cozad	100	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
				Seepage	0.06		
CrD2:							
Crofton	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.50	Deep to water	1.00
CrE2:							
Crofton	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.50	Deep to water	1.00
		Slope	0.02				
CrF2:							
Crofton	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.50	Deep to water	1.00
		Slope	0.24				
CrG:							
Crofton	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.50	Deep to water	1.00
		Seepage	0.70				
Fm:							
Fillmore	100	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.43	Ponding	1.00	Slow refill	0.30
				Depth to saturated zone	1.00	Cutbanks cave	0.10
				Hard to pack	0.62		
Gb:							
Gibbon	100	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Piping	0.97	Cutbanks cave	0.10
				Depth to saturated zone	0.95	Deep to water	0.02
GP:							
Pits	100	Not rated		Not rated		Not rated	
Gr:							
Grigston	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Piping	0.59	Deep to water	0.96
						Slow refill	0.30
						Cutbanks cave	0.10
Ha:							
Hall	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.27	Deep to water	1.00
Hc:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
HcB:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
HcC:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
HcD:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
HdC2:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HdD2:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
Hg:							
Hobbs	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.64	Deep to water	1.00
HhB:							
Hobbs	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.64	Deep to water	1.00
HkB:							
Holder	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
INT:							
Aquolls	100	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Ponding	1.00		
IvC:							
Inavale	100	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Cutbanks cave	1.00
						Deep to water	0.96
IwC:							
Inavale	65	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Deep to water	1.00
Boel	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Cutbanks cave	1.00
				Depth to saturated zone	0.95	Deep to water	0.02
JuC:							
Judson	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.29	Deep to water	1.00
Kz:							
Kezan	100	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
				Piping	0.92	Cutbanks cave	0.10
						Deep to water	0.00
La:							
Lamo	100	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.05	Depth to saturated zone	1.00	Slow refill	0.95
				Piping	0.08	Cutbanks cave	0.10
						Deep to water	0.00
LoC2:							
Longford	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.05	Hard to pack	0.68	Deep to water	1.00
LoD2:							
Longford	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.05	Hard to pack	0.68	Deep to water	1.00
M-W:							
Miscellaneous Water-	100	Not rated		Not rated		Not rated	
MnC:							
Monona	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.23	Deep to water	1.00
MnD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.62	Deep to water	1.00
MnE:							
Monona	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.23	Deep to water	1.00
		Slope	0.02				

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MnF:							
Monona	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.23	Deep to water	1.00
		Slope	0.24				
Mu:							
Muir	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Piping	0.60	Deep to water	0.96
						Slow refill	0.30
						Cutbanks cave	0.10
MuB:							
Muir	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Piping	0.60	Deep to water	0.96
						Slow refill	0.30
						Cutbanks cave	0.10
Ob:							
Olbut	65	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
				Piping	1.00	Cutbanks cave	0.10
						Salty water	0.06
Butler	35	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
OvB:							
Ovina	100	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Seepage	0.65	Deep to water	0.00
OxC:							
Ovina	50	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Seepage	0.65	Deep to water	0.00
Thurman	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
PaC2:							
Pawnee	100	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Slow refill	1.00
				Hard to pack	0.74	Cutbanks cave	0.10
						Deep to water	0.00
PaD2:							
Pawnee	100	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Slow refill	1.00
				Hard to pack	0.74	Cutbanks cave	0.10
						Deep to water	0.00
PoC2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.86	Deep to water	1.00
PoD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.86	Deep to water	1.00
PoE2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.86	Deep to water	1.00
		Slope	0.02				
PsD2:							
Pohocco	65	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.86	Deep to water	1.00
Crofton	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.50	Deep to water	1.00
PsE2:							
Pohocco	65	Somewhat limited		Somewhat limited		Very limited	

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Seepage	0.70	Piping	0.86	Deep to water	1.00
		Slope	0.02				
Crofton----------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.50	Deep to water	1.00
		Slope	0.02				
PsF2:							
Pohocco----------	65	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.86	Deep to water	1.00
		Slope	0.24				
Crofton----------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.50	Deep to water	1.00
		Slope	0.24				
Sa:							
Saltine----------	60	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Piping	1.00	Salty water	0.50
				Depth to saturated zone	0.95	Slow refill	0.43
				Salinity	0.12	Cutbanks cave	0.10
						Deep to water	0.02
Gibbon----------	40	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Piping	1.00	Cutbanks cave	0.10
				Depth to saturated zone	0.95	Deep to water	0.02
Sc:							
Scott----------	100	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Ponding	1.00	Slow refill	0.30
				Depth to saturated zone	1.00	Cutbanks cave	0.10
				Hard to pack	0.34		
Sh:							
Aksarben----------	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
ShC:							
Aksarben----------	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
ShC2:							
Yutan----------	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
ShD:							
Aksarben----------	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
ShD2:							
Yutan----------	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Deep to water	1.00
Sk:							
Silver Creek--------	100	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.95	Cutbanks cave	1.00
				Seepage	0.49	Deep to water	0.96
						Salty water	0.01
SmB:							
Simeon----------	100	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.91	Deep to water	1.00
StD2:							
Steinauer----------	100	Somewhat limited		Not limited		Very limited	
		Seepage	0.05			Deep to water	1.00
StF:							
Steinauer----------	100	Somewhat limited		Not limited		Very limited	
		Slope	0.15			Deep to water	1.00
		Seepage	0.05				
StG:							
Steinauer----------	100	Somewhat limited		Not limited		Very limited	
		Slope	0.88			Deep to water	1.00
		Seepage	0.05				

WATER MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ThC:							
Thurman	100	Very limited Seepage	 1.00	Very limited Seepage	 1.00	Very limited Deep to water	 1.00
TkD:							
Thurman	70	Very limited Seepage	 1.00	Very limited Seepage	 1.00	Very limited Deep to water	 1.00
Monona Variant	30	Somewhat limited Seepage	 0.70	Somewhat limited Piping Seepage	 0.93 0.09	Very limited Deep to water	 1.00
UaF2:							
Uly	100	Somewhat limited Seepage Slope	 0.70 0.01	Very limited Piping	 1.00	Very limited Deep to water	 1.00
UbF:							
Uly	60	Somewhat limited Seepage Slope	 0.70 0.21	Very limited Piping	 1.00	Very limited Deep to water	 1.00
Coly	40	Somewhat limited Seepage Slope	 0.70 0.21	Very limited Piping	 1.00	Very limited Deep to water	 1.00
UcF2:							
Coly	50	Somewhat limited Seepage Slope	 0.70 0.12	Very limited Piping	 1.00	Very limited Deep to water	 1.00
Uly	50	Somewhat limited Seepage Slope	 0.70 0.12	Very limited Piping	 1.00	Very limited Deep to water	 1.00
UhF2:							
Uly	70	Somewhat limited Seepage Slope	 0.70 0.06	Very limited Piping	 1.00	Very limited Deep to water	 1.00
Hobbs	30	Somewhat limited Seepage	 0.70	Somewhat limited Piping	 0.64	Very limited Deep to water	 1.00
UkC2:							
Uly Variant	100	Somewhat limited Seepage	 0.70	Somewhat limited Piping	 0.97	Very limited Deep to water	 1.00
W:							
Water	100	Not rated		Not rated		Not rated	
WoB:							
Wood River	100	Somewhat limited Seepage	 0.70	Very limited Piping	 1.00	Very limited Deep to water	 1.00
Zk:							
Zook	100	Not limited		Very limited Depth to saturated zone Hard to pack	 1.00 1.00	Somewhat limited Slow refill Cutbanks cave	 0.30 0.10
Zo:							
Zook	100	Not limited		Very limited Depth to saturated zone Hard to pack	 1.00 1.00	Very limited Slow refill Cutbanks cave	 1.00 0.10

SANITARY FACILITIES
Butler County, Nebraska

Sanitary Facilities

The following tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A trench sanitary landfill is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

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In an area sanitary landfill, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

SANITARY FACILITIES--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AED:					
Arents, Earthen Dam-	100	Not rated		Not rated	
Af:					
Alda	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Ba:					
Barney	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Bd:					
Blendon	100	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
BdC:					
Blendon	100	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.33
Bf:					
Blendon	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
Muir	40	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.84	Seepage	0.50
		Restricted permeability	0.50	Flooding	0.40
		Flooding	0.40	Depth to saturated zone	0.17
Bh:					
Boel	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Bn:					
Boel	55	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Alda	45	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Br:					
Brocksburg	100	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50		
BsD:					
Burchard	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.04		
BsE:					
Burchard	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.84		
BtE2:					
Burchard	50	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.84		
Steinauer	50	Very limited		Very limited	

SANITARY FACILITIES--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	1.00	Slope	1.00
		Slope	0.84		
Bu:					
Butler	100	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.50
CfG:					
Coly	100	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
CoB:					
Cozad	100	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.00
CrD2:					
Crofton	100	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
CrE2:					
Crofton	100	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
CrF2:					
Crofton	100	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
CrG:					
Crofton	100	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Fm:					
Fillmore	100	Very limited		Very limited	
		Restricted permeability	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.18
Gb:					
Gibbon	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	1.00
GP:					
Pits	100	Not rated		Not rated	
Gr:					
Grigston	100	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.84	Seepage	0.50
		Restricted permeability	0.50	Flooding	0.40
		Flooding	0.40	Depth to saturated zone	0.17
Ha:					
Hall	100	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
Hc:					
Hastings	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
HcB:					
Hastings	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.00
HcC:					
Hastings	100	Very limited		Somewhat limited	

SANITARY FACILITIES--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	1.00	Slope	0.67
				Seepage	0.50
HcD:					
Hastings	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.04	Seepage	0.50
HdC2:					
Hastings	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.67
				Seepage	0.50
HdD2:					
Hastings	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.04	Seepage	0.50
Hg:					
Hobbs	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Restricted permeability	0.50	Seepage	0.50
HhB:					
Hobbs	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Restricted permeability	0.50	Seepage	0.50
HkB:					
Holder	100	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.00
INT:					
Aquolls	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
IvC:					
Inavale	100	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	0.84	Slope	0.67
		Flooding	0.40	Flooding	0.40
				Depth to saturated zone	0.17
IwC:					
Inavale	65	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.67
Boel	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
JuC:					
Judson	100	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.33
Kz:					
Kezan	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
La:					
Lamo	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00		
LoC2:					
Longford	100	Very limited		Somewhat limited	

SANITARY FACILITIES--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	1.00	Slope	0.33
LoD2:					
Longford----------	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.04		
M-W:					
Miscellaneous Water-	100	Not rated		Not rated	
MnC:					
Monona----------	100	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.33
MnD2:					
Pohocco----------	100	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
MnE:					
Monona----------	100	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
MnF:					
Monona----------	100	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Mu:					
Muir----------	100	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.84	Seepage	0.50
		Restricted permeability	0.50	Flooding	0.40
		Flooding	0.40	Depth to saturated zone	0.17
MuB:					
Muir----------	100	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.84	Seepage	0.50
		Restricted permeability	0.50	Flooding	0.40
		Flooding	0.40	Depth to saturated zone	0.17
				Slope	0.00
Ob:					
Olbut----------	65	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
Butler----------	35	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.50
OvB:					
Ovina----------	100	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
				Slope	0.00
OxC:					
Ovina----------	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
				Slope	0.09
Thurman----------	50	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.09
PaC2:					
Pawnee----------	100	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00

SANITARY FACILITIES--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Depth to saturated zone	1.00	Slope	0.67
PaD2:					
Pawnee	100	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04		
PoC2:					
Pohocco	100	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.33
PoD2:					
Pohocco	100	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
PoE2:					
Pohocco	100	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
PsD2:					
Pohocco	65	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
Crofton	35	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
PsE2:					
Pohocco	65	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Crofton	35	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
PsF2:					
Pohocco	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Crofton	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Sa:					
Saltine	60	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.68	Seepage	0.50
Gibbon	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	1.00
Sc:					
Scott	100	Very limited		Very limited	
		Restricted permeability	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.50
Sh:					
Aksarben	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
ShC:					
Aksarben	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50

SANITARY FACILITIES--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
				Slope	0.33
ShC2:					
Yutan	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.33
ShD:					
Aksarben	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.04	Seepage	0.50
ShD2:					
Yutan	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.04	Seepage	0.50
Sk:					
Silver Creek	100	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	0.84	Flooding	0.40
		Flooding	0.40	Depth to saturated zone	0.17
SmB:					
Simeon	100	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.00
StD2:					
Steinauer	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.04		
StF:					
Steinauer	100	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00		
StG:					
Steinauer	100	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
ThC:					
Thurman	100	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.67
TkD:					
Thurman	70	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	0.04	Slope	1.00
Monona Variant	30	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
UaF2:					
Uly	100	Somewhat limited		Very limited	
		Slope	0.84	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
UbF:					
Uly	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Coly	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
UcF2:					
Coly	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Uly	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00

SANITARY FACILITIES--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	0.50	Seepage	0.50
UhF2:					
Uly	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Hobbs	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.00
UkC2:					
Uly Variant	100	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Slope	0.67
				Seepage	0.50
W:					
Water	100	Not rated		Not rated	
WoB:					
Wood River	100	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.00
Zk:					
Zook	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
Zo:					
Zook	100	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		

SANITARY FACILITIES--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AED:							
Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Af:							
Alda	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.68
		Too Sandy	1.00				
Ba:							
Barney	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	1.00
		Too Sandy	1.00				
Bd:							
Blendon	100	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Seepage	0.21
BdC:							
Blendon	100	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Seepage	0.21
Bf:							
Blendon	60	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Seepage	0.21
Muir	40	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Flooding	0.40	Flooding	0.40		
Bh:							
Boel	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.68
		Too Sandy	1.00				
Bn:							
Boel	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.68
		Too Sandy	1.00				
Alda	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.68
		Too Sandy	1.00				
Br:							
Brocksburg	100	Very limited		Very limited		Not limited	
		Seepage	1.00	Seepage	1.00		
BsD:							
Burchard	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
BsE:							
Burchard	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
		Too clayey	0.50			Too clayey	0.50
BtE2:							
Burchard	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
		Too clayey	0.50			Too clayey	0.50
Steinauer	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Hard to compact	1.00
		Too clayey	0.50			Slope	0.84
						Too clayey	0.50
Bu:							
Butler	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to saturated zone	1.00

SANITARY FACILITIES--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CfG:							
Coly	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
CoB:							
Cozad	100	Not limited		Not limited		Not limited	
CrD2:							
Crofton	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
CrE2:							
Crofton	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
CrF2:							
Crofton	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
CrG:							
Crofton	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fm:							
Fillmore	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
Gb:							
Gibbon	100	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.68
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.21
		Seepage	1.00	Seepage	1.00		
GP:							
Pits	100	Not rated		Not rated		Not rated	
Gr:							
Grigston	100	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Flooding	0.40	Flooding	0.40		
Ha:							
Hall	100	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
Hc:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
HcB:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
HcC:							
Hastings	100	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
HcD:							
Hastings	100	Somewhat limited		Somewhat limited		Very limited	
		Too clayey	0.50	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Too clayey	0.50
						Slope	0.04
HdC2:							
Hastings	100	Not limited		Not limited		Not limited	
HdD2:							
Hastings	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
Hg:							
Hobbs	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Hard to compact	1.00
HhB:							
Hobbs	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Hard to compact	1.00
HkB:							
Holder	100	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
INT:							
Aquolls	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00

SANITARY FACILITIES--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Seepage	1.00				
IvC:							
Inavale	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00	Flooding	0.40		
		Flooding	0.40				
IwC:							
Inavale	65	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00				
Boel	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.68
		Too Sandy	1.00				
JuC:							
Judson	100	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
Kz:							
Kezan	100	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
La:							
Lamo	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Hard to compact	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50			Too clayey	0.50
LoC2:							
Longford	100	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
LoD2:							
Longford	100	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Hard to compact	1.00
						Slope	0.04
M-W:							
Miscellaneous Water-	100	Not rated		Not rated		Not rated	
MnC:							
Monona	100	Not limited		Not limited		Not limited	
MnD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
MnE:							
Monona	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
MnF:							
Monona	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Mu:							
Muir	100	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Flooding	0.40	Flooding	0.40		
MuB:							
Muir	100	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Flooding	0.40	Flooding	0.40		
Ob:							
Olbut	65	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Hard to compact	1.00
Butler	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to saturated zone	1.00
OvB:							
Ovina	100	Very limited		Very limited		Somewhat limited	

SANITARY FACILITIES--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Seepage	1.00	Seepage	1.00	Seepage	0.50
OxC:							
Ovina	50	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Seepage	1.00	Seepage	1.00	Seepage	0.50
Thurman	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00			Seepage	1.00
PaC2:							
Pawnee	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to saturated zone	0.86
PaD2:							
Pawnee	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to saturated zone	0.86
						Slope	0.04
PoC2:							
Pohocco	100	Not limited		Not limited		Not limited	
PoD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
PoE2:							
Pohocco	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
PsD2:							
Pohocco	65	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
Crofton	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
PsE2:							
Pohocco	65	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
Crofton	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
PsF2:							
Pohocco	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Crofton	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Sa:							
Saltine	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Sodium content	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.68
		Sodium content	1.00			Too clayey	0.50
		Too clayey	0.50				
Gibbon	40	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.68
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.21
		Seepage	1.00	Seepage	1.00		
Sc:							
Scott	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Sh:							
Aksarben	100	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
ShC:							
Aksarben	100	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
ShC2:							
Yutan	100	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50

SANITARY FACILITIES--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ShD:							
Aksarben	100	Somewhat limited		Somewhat limited		Very limited	
		Too clayey	0.50	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Too clayey	0.50
						Slope	0.04
ShD2:							
Yutan	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
Sk:							
Silver Creek	100	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.50
		Seepage	1.00	Seepage	1.00		
		Flooding	0.40	Flooding	0.40		
SmB:							
Simeon	100	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00			Seepage	1.00
StD2:							
Steinauer	100	Somewhat limited		Somewhat limited		Very limited	
		Too clayey	0.50	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Too clayey	0.50
						Slope	0.04
StF:							
Steinauer	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
StG:							
Steinauer	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Hard to compact	1.00
						Too clayey	0.50
ThC:							
Thurman	100	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00			Seepage	1.00
TkD:							
Thurman	70	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00	Slope	0.04	Seepage	1.00
		Slope	0.04			Slope	0.04
Monona Variant	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
UaF2:							
Uly	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
UbF:							
Uly	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Coly	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
UcF2:							
Coly	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Uly	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
UhF2:							
Uly	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Hobbs	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Hard to compact	1.00
UkC2:							
Uly Variant	100	Not limited		Not limited		Not limited	
W:							
Water	100	Not rated		Not rated		Not rated	
WoB:							
Wood River	100	Very limited		Not limited		Very limited	
		Sodium content	1.00			Sodium content	1.00
						Hard to compact	1.00
Zk:							
Zook	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
Zo:							
Zook	100	Very limited		Very limited		Very limited	

SANITARY FACILITIES--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00

AGRICULTURAL WASTE MANAGEMENT
Butler County, Nebraska

The nature of the soil is also important in the application of organic wastes and wastewater to land as fertilizers and irrigation; it is also important when the soil is used as a medium for treatment and disposal of these wastes. Favorable soil properties are required to prevent environmental damage.

The use of organic wastes and wastewater as production resources will result in energy conservation, prevent the waste of these important resources, and prevent problems associated with their disposal. Where disposal is the goal, and a maximum amount is disposed in a minimum area to hold costs to a minimum, risk of environmental damage is the principal constraint. Where the reuse goal is pursued, and a minimum amount is applied to a maximum area to obtain the greatest benefit, environmental damage is unlikely.

Interpretations developed for waste management may include ratings for (1) manure and food processing wastes; (2) municipal sewage sludge; (3) irrigation use of wastewater; or (4) treatment of wastewater by the slow rate process, overland flow process, or rapid infiltration process. If available, these should be located in this subsection.

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The Ag-Waste tables show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, phosphorus, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation)and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are generally favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density.The wind erodibility group, the soil erodibility factor K, and slope are consideredin estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

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The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding.

The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

See the National Soil Handbook, September 1992, Part 620, for criteria used in rating soils for sanitary facilities and waste management.

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(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AED:							
Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Af:							
Alda	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.95	Flooding	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
		Droughty	0.08	Droughty	0.08	Droughty	0.08
		Sodium content	0.08	Sodium content	0.08	Sodium content	0.08
Ba:							
Barney	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to dense layer	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Droughty	0.84	Droughty	0.84
		Droughty	0.84				
Bd:							
Blendon	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
BdC:							
Blendon	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
						Too steep for surface application	0.08
Bf:							
Blendon	60	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
Muir	40	Not limited		Somewhat limited		Not limited	
				Flooding	0.40		
Bh:							
Boel	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Flooding	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.95	Filtering capacity	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
		Leaching limitation	0.45				
Bn:							
Boel	55	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Flooding	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.95	Filtering capacity	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
		Leaching limitation	0.45				
Alda	45	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.95	Flooding	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
		Droughty	0.08	Droughty	0.08	Droughty	0.08
		Sodium content	0.08	Sodium content	0.08	Sodium content	0.08
Br:							
Brocksburg	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.14	Droughty	0.14	Droughty	0.14
BsD:							
Burchard	100	Somewhat limited		Somewhat limited		Very limited	

AGRICULTURAL WASTE MANAGEMENT--Continued
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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.22
						Too steep for sprinkler application	0.22
BsE:							
Burchard----------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	0.89
						Restricted permeability	0.22
BtE2:							
Burchard----------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	0.89
						Restricted permeability	0.22
Steinauer----------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	0.89
						Restricted permeability	0.22
Bu:							
Butler----------	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Runoff limitation	0.40	Too acid	0.42	Too acid	0.42
		Too acid	0.11				
CfG:							
Coly----------	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
						Too steep for sprinkler application	1.00
CoB:							
Cozad----------	100	Not limited		Not limited		Not limited	
CrD2:							
Crofton----------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Too steep for surface application	1.00
						Too steep for sprinkler application	0.22
CrE2:							
Crofton----------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Too steep for surface application	1.00
						Too steep for sprinkler application	0.97
CrF2:							
Crofton----------	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Butler County, Nebraska

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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Too steep for sprinkler application	1.00
CrG:							
Crofton----------	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
						Too steep for sprinkler application	1.00
Fm:							
Fillmore----------	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40	Too acid	0.42	Too acid	0.42
		Too acid	0.11				
Gb:							
Gibbon----------	100	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.95	Flooding	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
GP:							
Pits----------	100	Not rated		Not rated		Not rated	
Gr:							
Grigston----------	100	Not limited		Somewhat limited		Not limited	
				Flooding	0.40		
Ha:							
Hall----------	100	Not limited		Not limited		Not limited	
Hc:							
Hastings----------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Too acid	0.03	Too acid	0.14	Too acid	0.14
HcB:							
Hastings----------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Too acid	0.03	Too acid	0.14	Too acid	0.14
HcC:							
Hastings----------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	0.31
		Too acid	0.03	Too acid	0.14	Restricted permeability	0.22
						Too acid	0.14
HcD:							
Hastings----------	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	1.00
		Slope	0.04	Too acid	0.14	Restricted permeability	0.22
		Too acid	0.03	Slope	0.04	Too steep for sprinkler application	0.22
						Too acid	0.14
HdC2:							
Hastings----------	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	0.31
		Too acid	0.03	Too acid	0.14	Restricted permeability	0.22
						Too acid	0.14
HdD2:							
Hastings----------	100	Somewhat limited		Somewhat limited		Very limited	

AGRICULTURAL WASTE MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	1.00
		Slope	0.04	Too acid	0.14	Restricted permeability	0.22
		Too acid	0.03	Slope	0.04	Too steep for sprinkler application	0.22
						Too acid	0.14
Hg:							
Hobbs	100	Somewhat limited		Very limited		Somewhat limited	
		Flooding	0.60	Flooding	1.00	Flooding	0.60
HhB:							
Hobbs	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
HkB:							
Holder	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid	0.02	Too acid	0.07	Too acid	0.07
INT:							
Aquolls	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Low adsorption	1.00	Low adsorption	1.00	Low adsorption	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
IvC:							
Inavale	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Flooding	0.40	Too steep for surface application	0.31
		Droughty	0.13	Droughty	0.13	Droughty	0.13
IwC:							
Inavale	65	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Flooding	1.00	Filtering capacity	1.00
		Flooding	0.60	Filtering capacity	1.00	Flooding	0.60
		Leaching limitation	0.45	Droughty	0.13	Too steep for surface application	0.31
		Droughty	0.13			Droughty	0.13
Boel	35	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Flooding	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.95	Filtering capacity	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
		Leaching limitation	0.45				
JuC:							
Judson	100	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.08
Kz:							
Kezan	100	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40				
La:							
Lamo	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Depth to saturated zone	1.00	Flooding	0.60
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
LoC2:							
Longford	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
						Too steep for surface application	0.08

AGRICULTURAL WASTE MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LoD2:							
Longford	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Slope	0.04	Slope	0.04	Too steep for surface application	1.00
						Too steep for sprinkler application	0.22
M-W:							
Miscellaneous Water-	100	Not rated		Not rated		Not rated	
MnC:							
Monona	100	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.08
MnD2:							
Pohocco	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Too steep for surface application	1.00
						Too steep for sprinkler application	0.22
MnE:							
Monona	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Too steep for surface application	1.00
						Too steep for sprinkler application	0.97
MnF:							
Monona	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
						Too steep for sprinkler application	1.00
Mu:							
Muir	100	Not limited		Somewhat limited		Not limited	
				Flooding	0.40		
MuB:							
Muir	100	Not limited		Somewhat limited		Not limited	
				Flooding	0.40		
Ob:							
Olbut	65	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Runoff limitation	0.40	Sodium content	0.08	Sodium content	0.08
		Sodium content	0.08				
		Salinity	0.06				
Butler	35	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Runoff limitation	0.40	Too acid	0.42	Too acid	0.42
		Too acid	0.11				
OvB:							
Ovina	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
OxC:							
Ovina	50	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Too steep for surface application	0.00
Thurman----------	50	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.29	Droughty	0.29
		Droughty	0.29			Too steep for surface application	0.00
PaC2:							
Pawnee----------	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40			Too steep for surface application	0.31
PaD2:							
Pawnee----------	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too steep for surface application	1.00
		Runoff limitation	0.40	Slope	0.04	Depth to saturated zone	1.00
		Slope	0.04			Too steep for sprinkler application	0.22
PoC2:							
Pohocco----------	100	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.08
PoD2:							
Pohocco----------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Too steep for surface application	1.00
						Too steep for sprinkler application	0.22
PoE2:							
Pohocco----------	100	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Too steep for surface application	1.00
						Too steep for sprinkler application	0.97
PsD2:							
Pohocco----------	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Too steep for surface application	1.00
						Too steep for sprinkler application	0.22
Crofton----------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Too steep for surface application	1.00
						Too steep for sprinkler application	0.22
PsE2:							
Pohocco----------	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Too steep for surface application	1.00
						Too steep for sprinkler application	0.97
Crofton----------	35	Somewhat limited		Somewhat limited		Very limited	

AGRICULTURAL WASTE MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Slope	0.96	Slope	0.96	Too steep for surface application	1.00
						Too steep for sprinkler application	0.97
PsF2:							
Pohocco	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
						Too steep for sprinkler application	1.00
Crofton	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
						Too steep for sprinkler application	1.00
Sa:							
Saltine	60	Very limited		Very limited		Very limited	
		Sodium content	1.00	Flooding	1.00	Sodium content	1.00
		Depth to saturated zone	0.95	Sodium content	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
		Salinity	0.50	Salinity	0.00	Salinity	0.00
Gibbon	40	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.95	Flooding	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
Sc:							
Scott	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40	Too acid	0.42	Too acid	0.42
		Too acid	0.11				
Sh:							
Aksarben	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Too acid	0.42	Too acid	0.42
		Too acid	0.11	Restricted permeability	0.22	Restricted permeability	0.22
ShC:							
Aksarben	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Too acid	0.42	Too acid	0.42
		Too acid	0.11	Restricted permeability	0.22	Restricted permeability	0.22
						Too steep for surface application	0.08
ShC2:							
Yutan	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Too acid	0.42	Too acid	0.42
		Too acid	0.11	Restricted permeability	0.22	Restricted permeability	0.22
						Too steep for surface application	0.08
ShD:							
Aksarben	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.30	Too acid	0.42	Too steep for surface application	1.00
		Too acid	0.11	Restricted permeability	0.22	Too acid	0.42
		Slope	0.04	Slope	0.04	Restricted permeability	0.22

AGRICULTURAL WASTE MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Too steep for sprinkler application	0.22
ShD2:							
Yutan	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.30	Too acid	0.42	Too steep for surface application	1.00
		Too acid	0.11	Restricted permeability	0.22	Too acid	0.42
		Slope	0.04	Slope	0.04	Restricted permeability	0.22
						Too steep for sprinkler application	0.22
Sk:							
Silver Creek	100	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Runoff limitation	0.40	Flooding	0.40		
		Salinity	0.01				
SmB:							
Simeon	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.12	Droughty	0.12
		Droughty	0.12				
StD2:							
Steinauer	100	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.22
						Too steep for sprinkler application	0.22
StF:							
Steinauer	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	1.00
						Restricted permeability	0.22
StG:							
Steinauer	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for sprinkler application	1.00
						Restricted permeability	0.22
ThC:							
Thurman	100	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.29	Too steep for surface application	0.31
		Droughty	0.29			Droughty	0.29
TkD:							
Thurman	70	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for surface application	1.00
		Leaching limitation	0.45	Droughty	0.29	Filtering capacity	1.00
		Droughty	0.29	Slope	0.04	Droughty	0.29

AGRICULTURAL WASTE MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Slope	0.04			Too steep for sprinkler application	0.22
Monona Variant------	30	Somewhat limited Slope	 0.04	Somewhat limited Slope	 0.04	Very limited Too steep for surface application	 1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application	0.22
						Filtering capacity	0.00
UaF2:							
Uly-----------------	100	Somewhat limited Slope	 0.84	Somewhat limited Slope	 0.84	Very limited Too steep for surface application	 1.00
						Too steep for sprinkler application	0.89
UbF:							
Uly-----------------	60	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Too steep for surface application	 1.00
						Too steep for sprinkler application	1.00
Coly-----------------	40	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Too steep for surface application	 1.00
						Too steep for sprinkler application	1.00
UcF2:							
Coly-----------------	50	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Too steep for surface application	 1.00
						Too steep for sprinkler application	1.00
Uly-----------------	50	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Too steep for surface application	 1.00
						Too steep for sprinkler application	1.00
UhF2:							
Uly-----------------	70	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Too steep for surface application	 1.00
						Too steep for sprinkler application	1.00
Hobbs----------------	30	Somewhat limited Flooding	 0.60	Very limited Flooding	 1.00	Somewhat limited Flooding	 0.60
UkC2:							
Uly Variant---------	100	Somewhat limited Sodium content Restricted permeability	 0.32 0.30	Somewhat limited Sodium content Restricted permeability	 0.32 0.22	Somewhat limited Sodium content Too steep for surface application	 0.32 0.31
		Salinity	0.06			Restricted permeability	0.22
W:							
Water----------------	100	Not rated		Not rated		Not rated	
WoB:							
Wood River----------	100	Very limited Sodium content Restricted permeability	 1.00 1.00	Very limited Sodium content Restricted permeability	 1.00 1.00	Very limited Sodium content Restricted permeability	 1.00 1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Butler County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Runoff limitation	0.40				
		Salinity	0.06				
Zk:							
Zook	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Flooding	1.00	Restricted permeability	1.00
		Flooding	0.60	Restricted permeability	1.00	Flooding	0.60
		Leaching limitation	0.50				
Zo:							
Zook	100	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Flooding	1.00	Restricted permeability	1.00
		Flooding	0.60	Restricted permeability	1.00	Flooding	0.60
		Leaching limitation	0.50				

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Butler County, Nebraska

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed. The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (USDA, 1999) and "Keys to Soil Taxonomy"' (USDA, 1998) and in the "Soil Survey Manual" (USDA, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1996).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units in the Hydric Soil Interpretations table meet the definition of hydric soils and, in addition, have at east one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1996).

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

These map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Butler County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
AED: ARENTS, EARTHEN DAM	ARENTS, EARTHEN DAM	Unranked	---	---	---	---	---
Af: ALDA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	ALDA	No	flood plain	---	---	---	---
	BARNEY	Yes	flood plain	3,2B3	YES	NO	YES
Ba: BARNEY LOAM, 0 TO 2 PERCENT SLOPES	BARNEY	Yes	flood plain	2B3	YES	NO	NO
Bd: BLENDON FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	BLENDON	No	terrace	---	---	---	---
BdC: BLENDON FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	BLENDON	No	terrace	---	---	---	---
Bf: BLENDON-MUIR COMPLEX, 0 TO 2 PERCENT SLOPES	BLENDON	No	terrace	---	---	---	---
	MUIR	No	flood plain	---	---	---	---
Bh: BOEL LOAM, 0 TO 2 PERCENT SLOPES	BOEL	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
Bn: BOEL-ALDA COMPLEX, 0 TO 2 PERCENT SLOPES	BOEL	No	flood plain	---	---	---	---
	ALDA	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
Br: BROCKSBURG SANDY LOAM, 0 TO 2 PERCENT SLOPES	BROCKSBURG	No	terrace	---	---	---	---
BsD: BURCHARD LOAM, 6 TO 11 PERCENT SLOPES	BURCHARD	No	hillslope	---	---	---	---
BsE: BURCHARD LOAM, 11 TO 15 PERCENT SLOPES	BURCHARD	No	hillslope	---	---	---	---
BtE2: BURCHARD-STEINAUER CLAY LOAMS, 11 TO 15 PERCENT SLOPES, ERODED	BURCHARD	No	hillslope	---	---	---	---
	STEINAUER	No	hillslope	---	---	---	---
Bu: BUTLER SILT LOAM, 0 TO 1 PERCENT SLOPES	BUTLER	No	swale, terrace	---	---	---	---
	FILLMORE	Yes	playa	2A	YES	NO	NO
CfG: COLY SILT LOAM, 30 TO 60 PERCENT SLOPES	COLY	No	hillslope	---	---	---	---
CoB: COZAD SILT LOAM, 1 TO 3 PERCENT SLOPES	COZAD	No	terrace	---	---	---	---
CrD2: CROFTON SILT LOAM, 6 TO 11 PERCENT SLOPES, ERODED	CROFTON	No	hillslope	---	---	---	---
CrE2: CROFTON SILT LOAM, 11 TO 17 PERCENT SLOPES, ERODED	CROFTON	No	hillslope	---	---	---	---
CrF2: CROFTON SILT LOAM, 17 TO 30 PERCENT SLOPES, ERODED	CROFTON	No	hillslope	---	---	---	---
CrG: CROFTON SILT LOAM, 30 TO 60 PERCENT SLOPES	CROFTON	No	hillslope	---	---	---	---
Fm: FILLMORE SILT LOAM, 0 TO 1 PERCENT SLOPES	FILLMORE	Yes	playa	2A	YES	NO	NO
	SCOTT	Yes	playa	3,2B3	YES	NO	YES
Gb: GIBBON SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	GIBBON	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B3	YES	NO	NO

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Butler County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
GP: GRAVEL PIT	PITS	Unranked	---	---	---	---	---
Gr: GRIGSTON SILT LOAM, 0 TO 1 PERCENT SLOPES	GRIGSTON	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B3	YES	NO	NO
Ha: HALL SILT LOAM, 0 TO 1 PERCENT SLOPES	HALL	No	terrace	---	---	---	---
Hc: HASTINGS SILT LOAM, 0 TO 1 PERCENT SLOPES	HASTINGS	No	interfluve	---	---	---	---
	FILLMORE	Yes	playa	2A	YES	NO	NO
HcB: HASTINGS SILT LOAM, 1 TO 3 PERCENT SLOPES	HASTINGS	No	interfluve	---	---	---	---
	FILLMORE	Yes	playa	2A	YES	NO	NO
HcC: HASTINGS SILT LOAM, 3 TO 6 PERCENT SLOPES	HASTINGS	No	hillslope	---	---	---	---
HcD: HASTINGS SILT LOAM, 6 TO 11 PERCENT SLOPES	HASTINGS	No	hillslope	---	---	---	---
HdC2: HASTINGS SILTY CLAY LOAM, 3 TO 6 PERCENT SLOPES, ERODED	HASTINGS	No	hillslope	---	---	---	---
	KEZAN	Yes	flood plain	2B3	YES	NO	NO
HdD2: HASTINGS SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	HASTINGS	No	hillslope	---	---	---	---
	KEZAN	Yes	flood plain	2B3	YES	NO	NO
Hg: HOBBS SILT LOAM, 0 TO 1 PERCENT SLOPES	HOBBS	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B3	YES	NO	NO
HhB: HOBBS SILT LOAM, CHANNELED, 0 TO 2 PERCENT SLOPES	HOBBS	No	flood plain	---	---	---	---
HkB: HOLDER SILT LOAM, 1 TO 3 PERCENT SLOPES	HOLDER	No	interfluve	---	---	---	---
INT: AQUOLLS	AQUOLLS	Yes	depression	3,2B3	YES	NO	YES
IvC: INAVALE LOAMY SAND, 2 TO 6 PERCENT SLOPES	INAVALE	No	flood plain	---	---	---	---
	PONDED SOILS	Yes	oxbow	2B1,3	YES	NO	YES
IwC: INAVALE-BOEL COMPLEX, 0 TO 6 PERCENT SLOPES	INAVALE	No	flood plain	---	---	---	---
	BOEL	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
JuC: JUDSON SILT LOAM, 2 TO 6 PERCENT SLOPES	JUDSON	No	hillslope, terrace	---	---	---	---
Kz: KEZAN SILT LOAM, 0 TO 2 PERCENT SLOPES	KEZAN	Yes	flood plain	2B3	YES	NO	NO
La: LAMO SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	LAMO	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B3	YES	NO	NO
LoC2: LONGFORD SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, ERODED	LONGFORD	No	hillslope	---	---	---	---
LoD2: LONGFORD SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	LONGFORD	No	hillslope	---	---	---	---
M-W: MISCELLANEOUS WATER (SEWAGE LAGOON)	MISCELLANEOUS WATER	---	---	---	---	---	---
MnC: MONONA SILT LOAM, 2 TO 6 PERCENT SLOPES	MONONA	No	hillslope	---	---	---	---

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Butler County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
MnD2: MONONA SILT LOAM, 6 TO 11 PERCENT SLOPES, ERODED	POHOCCO	No	hillslope	---	---	---	---
MnE: MONONA SILT LOAM, 11 TO 17 PERCENT SLOPES	MONONA	No	hillslope	---	---	---	---
MnF: MONONA SILT LOAM, 17 TO 30 PERCENT SLOPES	MONONA	No	hillslope	---	---	---	---
Mu: MUIR SILT LOAM, 0 TO 1 PERCENT SLOPES	MUIR	No	flood plain	---	---	---	---
MuB: MUIR SILT LOAM, 1 TO 3 PERCENT SLOPES	MUIR	No	flood plain, hillslope	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B3	YES	NO	NO
Ob: OLBUT-BUTLER SILT LOAMS, 0 TO 1 PERCENT SLOPES	OLBUT	Yes	playa	2A	YES	NO	NO
	BUTLER	No	swale	---	---	---	---
OvB: OVINA LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	OVINA	No	terrace	---	---	---	---
OxC: OVINA-THURMAN COMPLEX, 0 TO 6 PERCENT SLOPES	OVINA	No	terrace	---	---	---	---
	THURMAN	No	terrace	---	---	---	---
PaC2: PAWNEE CLAY LOAM, 3 TO 6 PERCENT SLOPES, ERODED	PAWNEE	No	hillslope	---	---	---	---
PaD2: PAWNEE CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	PAWNEE	No	hillslope	---	---	---	---
PoC2: PONCA SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, ERODED	POHOCCO	No	hillslope	---	---	---	---
PoD2: PONCA SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	POHOCCO	No	hillslope	---	---	---	---
PoE2: PONCA SILTY CLAY LOAM, 11 TO 17 PERCENT SLOPES, ERODED	POHOCCO	No	hillslope	---	---	---	---
PsD2: PONCA-CROFTON COMPLEX, 6 TO 11 PERCENT SLOPES, ERODED	POHOCCO	No	hillslope	---	---	---	---
	CROFTON	No	hillslope	---	---	---	---
PsE2: PONCA-CROFTON COMPLEX, 11 TO 17 PERCENT SLOPES, ERODED	POHOCCO	No	hillslope	---	---	---	---
	CROFTON	No	hillslope	---	---	---	---
PsF2: PONCA-CROFTON COMPLEX, 17 TO 30 PERCENT SLOPES, ERODED	POHOCCO	No	hillslope	---	---	---	---
	CROFTON	No	hillslope	---	---	---	---
Sa: SALTINE-GIBBON SILT LOAMS, 0 TO 1 PERCENT SLOPES	SALTINE	No	flood plain	---	---	---	---
	GIBBON	No	flood plain	---	---	---	---
Sc: SCOTT SILT LOAM, 0 TO 1 PERCENT SLOPES	SCOTT	Yes	playa	3,2B3	YES	NO	YES
Sh: SHARPSBURG SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	AKSARBEN	No	interfluve	---	---	---	---
ShC: SHARPSBURG SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES	AKSARBEN	No	interfluve	---	---	---	---

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Butler County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
ShC2:							
SHARPSBURG SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, ERODED	YUTAN	No	hillslope	---	---	---	---
ShD:							
SHARPSBURG SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES	AKSARBEN	No	interfluve	---	---	---	---
ShD2:							
SHARPSBURG SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	YUTAN	No	hillslope	---	---	---	---
Sk:							
SILVER CREEK COMPLEX, 0 TO 2 PERCENT SLOPES	SILVER CREEK	No	flood plain	---	---	---	---
SmB:							
SIMEON LOAMY SAND, 0 TO 3 PERCENT SLOPES	SIMEON	No	terrace	---	---	---	---
StD2:							
STEINAUER CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	STEINAUER	No	hillslope	---	---	---	---
StF:							
STEINAUER CLAY LOAM, 11 TO 30 PERCENT SLOPES	STEINAUER	No	hillslope	---	---	---	---
StG:							
STEINAUER CLAY LOAM, 30 TO 50 PERCENT SLOPES	STEINAUER	No	hillslope	---	---	---	---
ThC:							
THURMAN LOAMY FINE SAND, 3 TO 6 PERCENT SLOPES	THURMAN	No	terrace	---	---	---	---
TkD:							
THURMAN-MONONA COMPLEX, 6 TO 11 PERCENT SLOPES	THURMAN	No	hillslope	---	---	---	---
	MONONA VARIANT	No	hillslope	---	---	---	---
UaF2:							
ULY SILT LOAM, 11 TO 15 PERCENT SLOPES, ERODED	ULY	No	hillslope	---	---	---	---
	KEZAN	Yes	flood plain	2B3	YES	NO	NO
UbF:							
ULY-COLY SILT LOAMS, 15 TO 30 PERCENT SLOPES	ULY	No	hillslope	---	---	---	---
	COLY	No	hillslope	---	---	---	---
	KEZAN	Yes	flood plain	2B3	YES	NO	NO
UcF2:							
ULY-COLY SILT LOAMS, 15 TO 25 PERCENT SLOPES, ERODED	COLY	No	hillslope	---	---	---	---
	ULY	No	hillslope	---	---	---	---
	KEZAN	Yes	flood plain	2B3	YES	NO	NO
UhF2:							
ULY-HOBBS SILT LOAMS, 0 TO 30 PERCENT SLOPES, ERODED	ULY	No	hillslope	---	---	---	---
	HOBBS	No	flood plain	---	---	---	---
	KEZAN	Yes	flood plain	2B3	YES	NO	NO
UkC2:							
ULY VARIANT SILTY CLAY LOAM, 3 TO 6 PERCENT SLOPES, ERODED	ULY VARIANT	No	terrace	---	---	---	---
W:							
WATER	WATER	Unranked	---	---	---	---	---
WoB:							
WOOD RIVER SILT LOAM, 1 TO 3 PERCENT SLOPES	WOOD RIVER	No	terrace	---	---	---	---
Zk:							
ZOOK SILT LOAM, OVERWASH, 0 TO 2 PERCENT SLOPES	ZOOK	Yes	flood plain	2B3	YES	NO	NO
Zo:							
ZOOK SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	ZOOK	Yes	flood plain	2B3	YES	NO	NO

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Butler County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria

FOOTNOTE: There may be small areas of included soils or miscellaneous areas that are significant to use and management of the soil; yet are too small to delineate on the soil map at the map's original scale. These may be designated as spot symbols and are defined in the published Soil Survey Report or the USDA-NRCS Technical Guide, Part II.
Areas mapped as water or any map unit that contains one of the following conventional symbols is considered a hydric soil map unit: marshes or swamps; wet spots; depressions; streams, lakes and ponds.

1. All Histosols except Folists, or

2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:

   a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or

   b. poorly drained or very poorly drained and have either:

      (1) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in),

      or for other soils

      (2) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or

      (3) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or

3. Soils that are frequently ponded for long duration or very long duration during the growing season, or

4. Soils that are frequently flooded for long duration or very long duration during the growing season.

HIGHLY ERODIBLE LANDS REPORT

Survey Area- BUTLER COUNTY, NEBRASKA

Map Symbol	Soil Mapunit Name	HEL Classifications C=15 R=150 wnd	wat	mu
Af	ALDA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
Ba	BARNEY LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
Bd	BLENDON FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
BdC	BLENDON FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	3	3	3
Bf	BLENDON-MUIR COMPLEX, 0 TO 2 PERCENT SLOPES	3	3	3
Bh	BOEL LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
Bn	BOEL-ALDA COMPLEX, 0 TO 2 PERCENT SLOPES	3	3	3
Br	BROCKSBURG SANDY LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
BsD	BURCHARD LOAM, 6 TO 11 PERCENT SLOPES	3	2	2
BsE	BURCHARD LOAM, 11 TO 15 PERCENT SLOPES	3	1	1
BtE2	BURCHARD-STEINAUER CLAY LOAMS, 11 TO 15 PERCENT SLOPES, ERODED	3	1	1
Bu	BUTLER SILT LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
CfG	COLY SILT LOAM, 30 TO 60 PERCENT SLOPES	3	1	1
CoB	COZAD SILT LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
CrD2	CROFTON SILT LOAM, 6 TO 11 PERCENT SLOPES, ERODED	3	1	1
CrE2	CROFTON SILT LOAM, 11 TO 17 PERCENT SLOPES, ERODED	3	1	1
CrF2	CROFTON SILT LOAM, 17 TO 30 PERCENT SLOPES, ERODED	3	1	1
CrG	CROFTON SILT LOAM, 30 TO 60 PERCENT SLOPES	3	1	1
Fm	FILLMORE SILT LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
Gb	GIBBON SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
Gr	GRIGSTON SILT LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
Ha	HALL SILT LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
Hc	HASTINGS SILT LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
HcB	HASTINGS SILT LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
HcC	HASTINGS SILT LOAM, 3 TO 6 PERCENT SLOPES	3	2	2
HcD	HASTINGS SILT LOAM, 6 TO 11 PERCENT SLOPES	3	2	2
HdC2	HASTINGS SILTY CLAY LOAM, 3 TO 6 PERCENT SLOPES, ERODED	3	2	2
HdD2	HASTINGS SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	3	2	2
Hg	HOBBS SILT LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
HhB	HOBBS SILT LOAM, CHANNELED, 0 TO 2 PERCENT SLOPES	3	3	3
HkB	HOLDER SILT LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
IvC	INAVALE LOAMY SAND, 2 TO 6 PERCENT SLOPES	3	3	3
IwC	INAVALE-BOEL COMPLEX, 0 TO 6 PERCENT SLOPES	3	3	3
JuC	JUDSON SILT LOAM, 2 TO 6 PERCENT SLOPES	3	2	2
Kz	KEZAN SILT LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
La	LAMO SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
LoC2	LONGFORD SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, ERODED	3	2	2
LoD2	LONGFORD SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	3	2	2
MnC	MONONA SILT LOAM, 2 TO 6 PERCENT SLOPES	3	2	2
MnD2	MONONA SILT LOAM, 6 TO 11 PERCENT SLOPES, ERODED	3	2	2
MnE	MONONA SILT LOAM, 11 TO 17 PERCENT SLOPES	3	1	1
MnF	MONONA SILT LOAM, 17 TO 30 PERCENT SLOPES	3	1	1
Mu	MUIR SILT LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
MuB	MUIR SILT LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
Ob	OLBUT-BUTLER SILT LOAMS, 0 TO 1 PERCENT SLOPES	3	3	3
OvB	OVINA LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	3	3	3
OxC	OVINA-THURMAN COMPLEX, 0 TO 6 PERCENT SLOPES	3	3	3
PaC2	PAWNEE CLAY LOAM, 3 TO 6 PERCENT SLOPES, ERODED	3	2	2
PaD2	PAWNEE CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	3	1	1
Pg	PITS, GRAVEL		2	2
PoC2	PONCA SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, ERODED	3	2	2
PoD2	PONCA SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	3	2	2
PoE2	PONCA SILTY CLAY LOAM, 11 TO 17 PERCENT SLOPES,	3	1	1

	ERODED			
PsD2	PONCA-CROFTON COMPLEX, 6 TO 11 PERCENT SLOPES, ERODED	3	2	2
PsE2	PONCA-CROFTON COMPLEX, 11 TO 17 PERCENT SLOPES, ERODED	3	1	1
PsF2	PONCA-CROFTON COMPLEX, 17 TO 30 PERCENT SLOPES, ERODED	3	1	1
Sa	SALTINE-GIBBON SILT LOAMS, 0 TO 1 PERCENT SLOPES	3	3	3
Sc	SCOTT SILT LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
Sh	SHARPSBURG SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	3	3	3
ShC	SHARPSBURG SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES	3	2	2
ShC2	SHARPSBURG SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, ERODED	3	2	2
ShD	SHARPSBURG SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES	3	2	2
ShD2	SHARPSBURG SILTY CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	3	2	2
Sk	SILVER CREEK COMPLEX, 0 TO 2 PERCENT SLOPES	3	3	3
SmB	SIMEON LOAMY SAND, 0 TO 3 PERCENT SLOPES	3	3	3
StD2	STEINAUER CLAY LOAM, 6 TO 11 PERCENT SLOPES, ERODED	3	2	2
StF	STEINAUER CLAY LOAM, 11 TO 30 PERCENT SLOPES	3	1	1
StG	STEINAUER CLAY LOAM, 30 TO 50 PERCENT SLOPES	3	1	1
ThC	THURMAN LOAMY FINE SAND, 3 TO 6 PERCENT SLOPES	3	3	3
TkD	THURMAN-MONONA COMPLEX, 6 TO 11 PERCENT SLOPES	3	2	2
UaF2	ULY SILT LOAM, 11 TO 15 PERCENT SLOPES, ERODED	3	1	1
UbF	ULY-COLY SILT LOAMS, 15 TO 30 PERCENT SLOPES	3	1	1
UcF2	ULY-COLY SILT LOAMS, 15 TO 25 PERCENT SLOPES, ERODED	3	1	1
UhF2	ULY-HOBBS SILT LOAMS, 0 TO 30 PERCENT SLOPES, ERODED	3	2	2
UkC2	ULY VARIANT SILTY CLAY LOAM, 3 TO 6 PERCENT SLOPES, ERODED	3	2	2
WoB	WOOD RIVER SILT LOAM, 1 TO 3 PERCENT SLOPES	3	2	2
Zk	ZOOK SILT LOAM, OVERWASH, 0 TO 2 PERCENT SLOPES	3	3	3
Zo	ZOOK SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	3	3	3